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UNITED STATES DEPARTMENT OF AGRICULTURE  
Office of Foreign Agricultural Relations

WORLD FRESH PEAR PRODUCTION AND TRADE

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## WORLD FRESH PEAR PRODUCTION AND TRADE 1/

### SUMMARY

Exports of fresh pears from the United States, unlike the trend in exports of many other agricultural products, have expanded rapidly during the past 20 years. The volume of overseas shipments reached a record high during the 1938-39 season. The export market has served as a valuable outlet for the American pear industry, since it absorbed increasing quantities of fresh pears during a period when domestic production was expanding rapidly. The United States is the world's largest producer and exporter of pears, and the trend in domestic production is expected to continue upward for the next few years. The volume of American and other pears which will be absorbed by import markets, therefore, will materially affect the economic position of American pear producers.

World pear production has increased at a moderate rate for the past two decades. Production of both dessert and culinary varieties has expanded rapidly in several non-European countries, notably Argentina and the United States, while European production - a large portion of which consists of perry pears - has risen only slightly. Based on the age distribution of present plantings, world production should continue upward for the next few years, principally because of heavier crops in the United States and Southern Hemisphere countries. Not only has the volume of pears increased but substantial improvements have taken place since the World War in the average quality of the fruit and presentation of the pack.

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Foreign trade statistics in this report prepared by Miss Susie White of the Office of Foreign Agricultural Relations.

1/ This study covers developments in the world pear situation for the two decades between the World War and the current war. The war now in progress has checked international trade in pears and will, it seems certain, permanently alter the world pear situation. Since the extent of these changes cannot now be foreseen, the study does not attempt to cover the situation beyond 1939. Political boundaries as of January 1938 are used for the countries covered in this report.

During the past two decades, the volume of world pear exports has remained relatively stable. Significant changes, however, took place in the relative importance of various exporting countries. During the 1920's the leading exporters were Belgium, the United States, Italy, the Netherlands, and Czechoslovakia, in the order named, while the United States, Italy, Argentina, Australia, and South Africa were the top ranking shippers during the late 1930's.

Surplus-producing regions outside of Europe have expanded their exports substantially during the past 15 years. The rapid increase in exports from Argentina during the past few seasons and in those from the United States during the past decade are outstanding examples of this development. The non-European countries have, to a considerable extent, expanded exports at the expense of shipments from surplus-producing areas within Europe. During the 1920's, the larger portion of world exports came from European exporting countries, but around three-fourths of the total now originates in the non-European surplus-producing countries. Pears produced in the newer commercial fruit regions outside of Europe are superior in quality and in pack to the bulk of the pears grown in Europe. Consequently, even European exporting countries, such as Belgium and France, have imported increasing quantities of non-European fruit in recent years.

Pears produced in the commercial-fruit sections outside of Europe, however, have displaced European-grown pears only in those countries that have followed relatively liberal foreign-trade policies. During the past decade, for example, the Western and Northern European countries drew the bulk of their supplies from regions outside of Europe, while the importing countries in Central Europe, with their rather stringent import controls, continued to obtain their requirements in neighboring European countries.

On the import side, over 90 percent of the pears moving in international trade continues to go to Europe. Imports into the United Kingdom, the principal importing country, have been slightly upward. Imports into Germany, which ranks second, have been declining, largely as a consequence of exchange and import controls. Imports into Belgium, France, and the Scandinavian countries have been steadily upward.

Imports into Egypt and Palestine have been increasing, and the United States has supplied the major portion of their arrivals in recent years. Principally because of heavier Argentine exports, imports into certain South American countries appear to be increasing. The Orient, for the most part, continues to be a self-contained unit, since surplus regions in this area provide the bulk of imports for the deficit pear sections.



### WORLD PRODUCTION

Production of pears in the 28 producing countries for which statistics are available has increased substantially since the world War. Production during the 5 years, 1931-32 to 1935-36, averaged around 120,749,000 bushels, or about 9 percent more than the average crop of the previous 5 years.

Pears are produced in most of the countries in the Temperate Zones and the centers of heaviest production are in Europe and North America. During the 5-year period, 1931-32 to 1935-36, European countries accounted for about 68 percent of the total reported world crop. Germany, France, Italy, and Switzerland produced nearly 70 percent of the European crop during this period. The bulk of German and French production is of "perry" varieties. <sup>2/</sup> Although exact figures are not available, a substantial portion of European production consists of perry pears.

Production in North America accounted for over a fifth of the world crop during this 5-year period, with the United States producing almost the entire output. Production in Canada and Mexico is very small. Commercial production in South America is centered in Argentina, with Chile a minor producer. In Africa, pears are produced commercially only in the Union of South Africa. Both Australia and New Zealand produce pears on a considerable scale. Plantings are also extensive in Japan, Chosen, and North China, although statistical data for North China are not available. Non-European pear production consists almost entirely of dessert and cooking varieties.

The United States is the leading producing country, accounting for about 21 percent of the world crop, followed by Germany with 20 and France with 15 percent. The French figures for perry pears, it should be noted, have been estimated, since French statistics group cider apples and perry pears together. Most of the world crop of dessert and cooking fruit is produced in the United States, Argentina, Italy, Czechoslovakia, Japan, Australia, the United Kingdom, and South Africa, while the larger portion of the perry crop is grown in Germany, France, Switzerland, and Austria.

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<sup>2/</sup> Pears can be divided into (1) dessert and cooking and (2) perry varieties. Perry varieties have a high tannin content and are too astringent for fresh consumption. They are used principally for beverage purposes. These are planted extensively in Europe, but plantings outside of that Continent are very limited. Dessert and cooking varieties are edible in the fresh state. Usually the better-quality dessert and cooking pears are consumed as table fruit, while those of lower quality are used chiefly for cooking, particularly in European countries.

PEARS: Production in principal producing countries, average 1926-27 to 1930-31, 1931-32 to 1935-36, annual 1936-37 to 1939-40

Country	Average.					
	1926-27 to 1930-31	1931-32 to 1935-36	1936-37	1937-38	1938-39	1939-40
	: 1,000	: 1,000	: 1,000	: 1,000	: 1,000	: 1,000
	: bushels	: bushels	: bushels	: bushels	: bushels	: bushels
United States....	22,965	25,105	27,165	29,548	32,473	30,282
Canada.....	335	449	431	458	653	604
Mexico.....	b/ 348	335	278	317		
Argentina c/.....	d/ 200	e/ 391	1,786	2,374	2,816	1,408
Chile.....	d/ 12	d/ 35	95	53		
Australia.....	1,620	2,020	2,692	2,483	2,304	2,161
New Zealand.....	223	f/ 275	251	d/ 250		
South Africa g/..	350	670	705	624		
Chosen.....	554	613	600	d/ 600		
Japan.....	6,380	7,127	7,365	d/ 7,000		
Total ex-Europe:	32,987	37,020	41,368	43,707		
Austria h/.....	f/ 714	1,027	1,440	d/ 1,100		
Austria i/.....	f/ 3,042	4,368	4,560	d/ 4,400		
Bulgaria.....	9	15	26	71	84	
Czechoslovakia..	3,136	5,218	4,776	2,894		
England & Wales h/	1,016	637	1,248	444		
England & Wales i/	157	161	381	110		
France f/ h/.....	1,330	1,421	1,738	1,846	1,828	
France f/ i/.....	15,589	16,756	32,383	16,598	52,074	
Germany.....	d/ 23,000	j/ 23,750	17,412	20,260	6,530	
Greece.....	448	673	956	998		
Hungary.....	d/ 250	d/ 300	400	280		
Italy.....	k/ 7,222	8,200	14,274	9,666	7,055	
Luxemburg.....	158	164	124	d/ 130		
Netherlands l/..	d/ 1,500	b/ 1,483	968	1,815		
Norway.....	d/ 100	b/ 149	93	163	132	
Rumania.....	d/ 4,562	2,096	2,000	4,581	7,574	
Spain.....	j/ 3,156	3,255	d/ 3,100	d/ 3,000		
Switzerland.....	6,751	8,183	6,613	7,937	7,275	
Syria & Lebanon..	d/ 25	e/ 30	40	49		
Turkey.....	d/ 2,600	e/ 2,945	3,788	d/ 3,500		
Yugoslavia.....	3,078	2,898	3,248	1,887	1,270	
Total Europe..	77,843	83,729	99,568	81,729		
Total all						
Countries..	110,830	120,749	140,936	125,436		

Compiled from official, trade and consular sources.

Marketing year. The year 1936-37, for example, refers to the crop in Northern Hemisphere countries which blossomed and was harvested in 1936; while the crop in Southern Hemisphere countries blossomed in 1936 and was harvested in 1937.

a/ Preliminary. b/ 4 year average. c/ Converted from boxes to bushels.

d/ Rough estimate. e/ One year only. f/ Partially estimated.

g/ Based upon exports. h/ Table pears only. i/ "Perry" pears only.

j/ 3 years only. k/ 2 years only. l/ Fruit sold at auction.



Most of the recent expansion in world pear production has taken place in countries that produce dessert and cooking fruit. The production trend in Argentina and the United States has been sharply upward, while the increases in the crop in Australia, South Africa, Italy, and Canada during this period have also been substantial. Production in these countries is expected to increase further in the next few years, as new plantings come into bearing and other trees approach full-bearing age. The trend in many European countries has been toward expansion in the production of table and cooking pears and reduction in the plantings of perry varieties.

Pear culture varies considerably in the different producing areas of the world. Commercial-orchard production, which is typical of present-day American pear culture, has been adopted in certain of the more recently developed areas. Production in gardens and farms (somewhat similar to farm production in this country) and along highways were formerly the most common methods of planting in Europe; but commercial plantings, which have been patterned more along the lines of the planting systems employed in the United States, have been set out on an increasing scale since 1918, particularly in Western Europe. A substantial portion of the European dessert-pear crop is produced on dwarf and semi-dwarf trees, and in many areas these dwarf plantings are Espalier trained (similar to grapevines in this country) being heavily pruned and thinned to produce large-sized table fruit.

Significant advances have taken place in the cultural methods of many producing regions since 1918. The United States has been a leader in introducing technical and scientific improvements into commercial pear production, and the newer pear regions have adopted many of these practices, especially in the physical handling of the crop. Although progress, on the whole, has not been very rapid in Europe, some improvement in growing and handling methods is in evidence in certain pear-growing districts. Producers have been encouraged to rework old orchards, grafting old trees over to improved varieties and replacing others with more marketable varieties, and to give the trees more care, particularly with respect to pruning, spraying, etc. Fruit growing in Europe in many cases began as a sideline to other types of farming but in many countries it has been developing into an independent industry on an increasing scale in recent years.

An important consideration in the production of pears in Western and Northern Europe is the fact that climatic conditions in this area are not as favorable for pear-growing as they are in other producing regions. Besides the recurring threat of frost damage after spring blossoming, rain and wind frequently occur at critical periods in the development of the fruit. Principally as a result of weather conditions, therefore, pear crops in many European countries are extremely uncertain, and exceptionally wide variations occur from year to year in the quantity and quality harvested. This uncertainty has been an important factor in restricting the expansion of plantings and in maintaining interest in imported supplies.

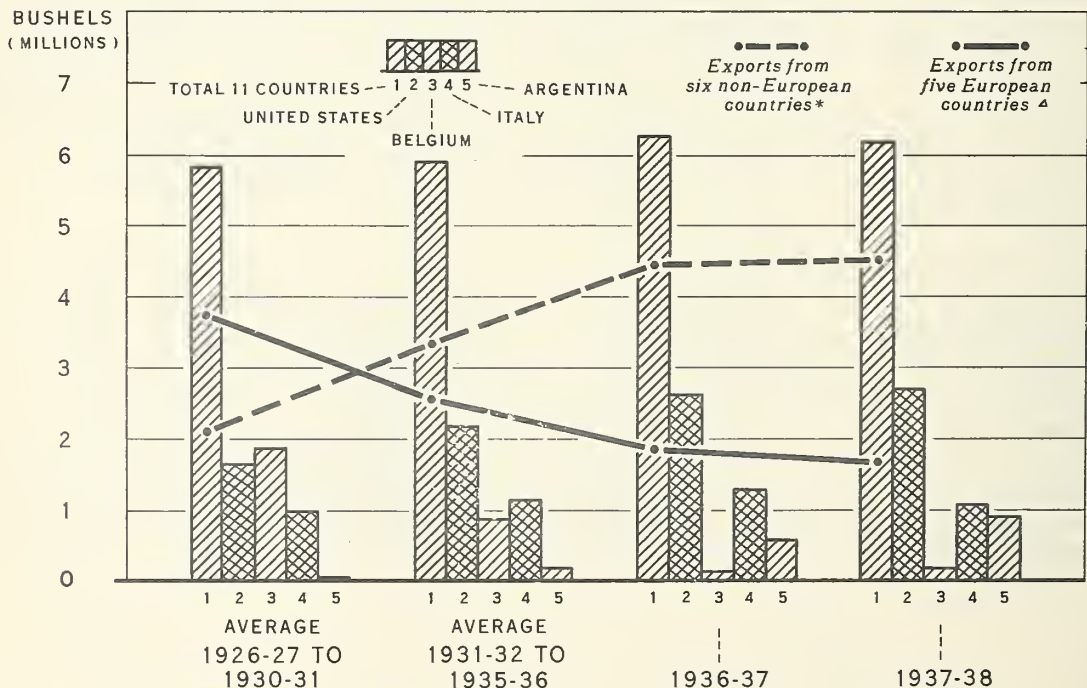
## INTERNATIONAL TRADE

International trade in fresh pears has ranged between 6 and 6.5 million bushels annually during the past two decades. This volume is less than the quantities of bananas, fresh apples, oranges, and lemons that move into international trade, but is greater than shipments of grapefruit. During the past decade, generally speaking, pears have been shipped from surplus-producing areas outside of Europe to European consuming centers. Prior to 1930, the bulk of exports originated in European surplus regions and moved into European importing countries.

### World Exports

Exports of pears from the 11 important surplus-producing countries for which statistics are available have been increasing during the past two decades. During the last two seasons for which complete data are available, 1936-37 and 1937-38, reported exports averaged 6,497,500 bushels, an increase of over 450,000 bushels, or around 8 percent, over the average movement during the 5 years, 1926-27 to 1930-31. Export statistics, however, for several countries, notably Switzerland, are not available. According to estimates of the British Imperial Economic Committee, Swiss exports have been declining.

### PEARS: EXPORTS FROM PRINCIPAL COUNTRIES REPORTING



\* UNITED STATES, ARGENTINA, AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, AND CHILE

△ BELGIUM, ITALY, CZECHOSLOVAKIA, NETHERLANDS, AND FRANCE

PEARS: Exports from principal producing countries, marketing years, averages 1926-27 to 1930-31, 1931-32 to 1935-36, annual 1936-37 to 1938-39

Country	Averages		1936-37	1937-38	1938-39
	1926-27 to 1930-31	1931-32 to 1935-36			
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
Non-European					
United States.....	1,618	2,186	2,626	2,694	3,419
Argentina.....	13	159	572	805	1,245
Australia.....	173	446	674	517	
New Zealand.....	32	85	33	a/ 33	
South Africa b/...	251	478	505	446	
Chile.....	2	12	21	17	
Canada.....	23	58	53	58	114
Total.....	2,112	3,424	4,484	4,570	
China.....	164	194	226	182	192
Total ex-Europe..	2,276	3,618	4,710	4,752	
European					
Belgium.....	1,849	884	121	140	2
Italy.....	971	1,115	1,288	1,045	1,018
Czechoslovakia....a/	368	368	392	221	c/ 128
Netherlands.....	369	148	37	255	15
France d/.....e/	196	51	13	21	108
Total Europe..	3,753	2,566	1,851	1,682	1,271
Total all countries..	6,029	6,184	6,561	6,434	

Compiled from official sources. Bushels of 50 pounds. The United States marketing season, July to June, has been taken as the basis for the statistics. Crops in European countries blossom in the spring and are marketed between July and October of the earlier year shown; while crops in Southern Hemisphere countries blossom in the fall of the earlier year and are marketed between January and June of the latter year shown. Thus, for example, for the exports for the 1936-37 season, the following exporting years were used: United States, July to June; European countries, calendar year 1936 and for Southern Hemisphere countries, calendar year 1937.

a/ Rough approximation in order to get trend in world exports.

b/ Partially estimated.

c/ January to September only.

d/ Table pears only.

e/ 2 years only (1929 and 1930).



Although non-European countries (excluding China) provide only 32 percent of reported world production, they accounted for 74 percent of exports in 1937-38. Four of the five leading surplus-producing countries were outside of Europe. The United States has been the world's most important exporter of pears since the late 1920's. In 1937-38, the United States contributed 43 percent of the total exports, followed by Italy with 17 percent, Argentina with 13, Australia with 8, and South Africa with 7 percent.

Prior to 1930, European countries were the leading exporters of the fruit. During the five seasons, 1926-27 to 1930-31, European surplus-producing sections provided 62 percent of reported world exports. Belgium was the principal exporting country during this period, with 31 percent of the total, followed by the United States with 27 percent, Italy with 16, and the Netherlands and Czechoslovakia with 6 percent each.

The upward trend in exports from non-European surplus-producing countries has probably been the outstanding development in the world pear situation since 1918. The superior quality of their product and the superior pack and standardization of their exports have been important factors in this increase. British imperial preference, which was initiated in 1932, has been of material assistance in the expansion of exports from certain British Dominions. Recent improvements in transportation and refrigeration, which have permitted the shipment of even the more highly perishable varieties of pears over large distances, have accelerated this development.

#### World Imports

Although they are important producers of the fruit, European countries account for the bulk of the world imports of pears. During the 5 years, 1931-1935, eight European countries took 92 percent of reported world imports. Imports into five of the eight European countries have tended to increase during the past 20 years but the decline in the other three countries, particularly Germany, has been sufficient to more than offset the increases shown in the other countries.

The United Kingdom is the world's largest importer, accounting for 3,020,000 bushels or 55 percent of the total in 1938. Between 1926 and 1930, Germany, the second most important importing country, took almost as great a volume of pears as the United Kingdom, but imports dropped sharply in the 1930's. In 1938 German imports amounted to only 41 percent of the average volume attained during the 1926-1930 period. Imports into certain European surplus-producing countries, particularly Belgium and France, have increased substantially over the past decade.



PEARS: Imports into principal importing countries, calendar years,  
averages 1926 to 1930, 1931 to 1935,  
annual 1936 to 1938

Country	Averages		1936	1937	1938
	1926 to 1930	1931 to 1935			
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
European					
United Kingdom.....	2,452	2,582	2,585	2,494	3,020
Germany.....	2,408	1,608	1,177	1,037	985
France.....	255	561	552	512	568
Netherlands.....	239	250	158	78	254
Belgium.....	5	22	148	250	274
Sweden.....	275	277	340	302	433
Finland.....	42	39	60	64	68
Denmark.....	151	73	8	8	6
Total Europe..	5,827	5,412	5,028	4,745	5,608
Non-European					
Canada.....	444	251	463	350	266
Cuba.....	31	16	23	18	30
Mexico <u>a/</u> .....	15	3	8	13	11
Brazil.....	98	122	207	<u>b/</u>	<u>b/</u>
Argentina <u>a/</u> .....	36	22	8	7	10
Egypt.....	63	38	78	67	81
Palestine <u>a/</u> .....	<u>c/</u>	18	41	27	20
Total ex-Europe..	687	470	828	<u>b/</u>	<u>b/</u>
Total all countries..	6,514	5,882	5,856	<u>b/</u>	<u>b/</u>

Compiled from official sources. Bushels of 50 pounds. Calendar years.

a/ United States exports only. July-to-June year.

b/ Not available.

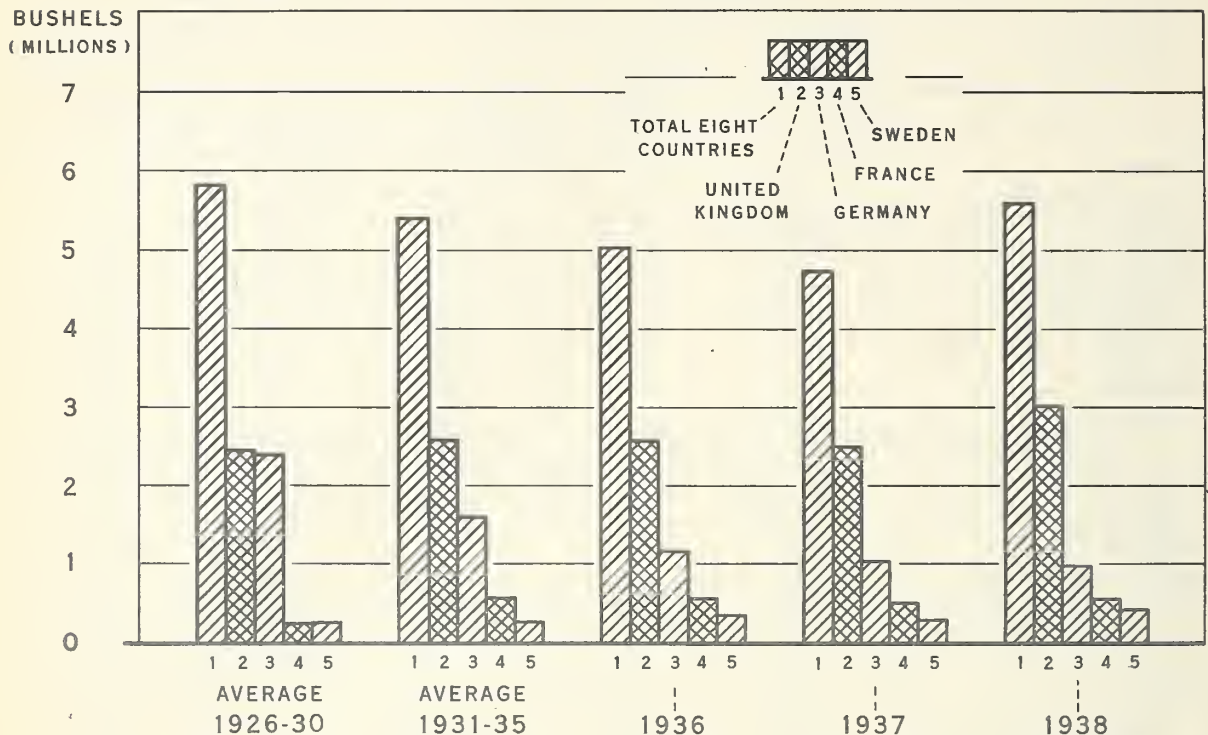
c/ Less than 500 bushels.

Canada and Brazil are the leading importers of pears outside of Europe. Imports into seven non-European countries averaged about 8 percent of the reported world total between 1931 and 1935, compared with almost 11 percent during the previous 5 years. The decline in imports into some of these countries, in part, reflects the reduction in their import trade that resulted from economic difficulties precipitated by the 1929 world depression.

#### Improvements in marketing of pears

Substantial improvements have been made in the marketing of fresh pears during the past two decades, notably in the newer exporting countries. Export regulations in many countries have removed much low quality fruit from international trade. Standardization of the size, grade, and variety of the fruit

## PEARS: IMPORTS INTO PRINCIPAL EUROPEAN COUNTRIES



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and in the size of the package has been the objective of most of these regulations. Packing of the fruit in the container has also been made more attractive.

Many different types of containers are used in packing pears for export. In the United States the standard western box containing almost one bushel predominates, though the half-box is used on the West Coast and the basket in eastern pear regions. Argentina has adopted the American standard box. The half-box, three-quarter bushel "flat", and the standard box are all used in Australia and New Zealand. Although South Africa continues to use many types of packages, from single- and double-layer trays to standard boxes, there has been a marked tendency in recent years to make more extensive use of the standard box. The better dessert pears in most European countries are packed chiefly in trays, barrels of 30-40 pounds, and other small containers.

Substantial improvement has taken place in the equipment for transporting fruit. The increased use of refrigerated storage facilities and the construction of specially equipped ships to transport fresh fruit are the most significant developments in this field. Precooling also has been adopted on a wide scale in the United States and South Africa and to a lesser extent in other

countries. These advances have made it possible to ship even the more perishable varieties of pears over greater distances.

In European countries, storage facilities have been expanded, but these are largely used for storing the imported product rather than home-grown pears. As a result, the marketing season for better-quality home-grown pears has been extended only slightly during the past 20 years and European table pears, even in years of heavy crops, are seldom available in volume after Christmas.

The expansion of facilities for merchandising and distributing fresh pears from producing countries outside of Europe has naturally accompanied the increase in the volume of exports from these countries. This, of course, has brought about some change in the organization of distribution and in the buying habits of the trade in importing countries. The trade in many instances has become accustomed to handling pears that are packed by count, of a specified variety, size, and grade. This is one reason for the displacement of European pears by those from producing regions outside of Europe, since European pears are usually packed in miscellaneous packages and are not of a specified size and grade. In the United Kingdom, for example, the quality of certain varieties of European pears is rated very high, but their general lack of grading and sizing and their appearance make them unacceptable to the better class of trade. As a result, barrow vendors and greengrocers are depended upon as an outlet for such fruit.

### Consumption

Consumption of fresh fruit in most of the important importing countries in Europe has expanded since the World War. Wider recognition of the health qualities of fresh-fruit and "Eat More Fruit" campaigns have stimulated consumer demand. Further, fresh fruit supplies generally have been much more abundant in most countries, since world fruit production has expanded substantially during the past two decades.

The rate of consumption of pears in Europe, as well as that of other fruit, is determined by retail prices. European housewives are rather careful in their budgeting and are not in a position to pay more than certain definite sums for fruit. When pears are offered in the retail shops within the popular price range, the fruit tends to move into consumption freely; but, when prices rise above this level, consumption drops sharply.

Weather has an important day-to-day influence upon the demand for pears. Pears are not a cold-weather fruit and spells of bad weather are invariably accompanied by a general lack of interest in the fruit on the part of consumers.

### EXPORTING COUNTRIES OUTSIDE EUROPE

Almost three-fourths of the pears that have moved into international trade in recent years have originated in the surplus-producing regions outside of Europe. The United States is the leading exporter among these countries,



followed by Argentina, Australia and New Zealand, and South Africa. Canada and Chile are minor exporters among this group of countries. 3/

### United States

The United States has been the world's most important producer and exporter of fresh pears since the early 1930's. In the 5-year period, 1931-1932 to 1935-36, the United States accounted for 21 percent of world production and 37 percent of world exports. American production of pears has been upward and, on the basis of present plantings, is expected to continue expanding during the next few years.

### Production

United States pear production has increased rapidly during the past two decades. The average crop during the 5 years, 1931-32 to 1935-36, which amounted to over 25 million bushels, was about 42 percent heavier than the average for the 5-year period, 1921-22 to 1925-26. Production in 1938-39 reached the record high of 32 million bushels.

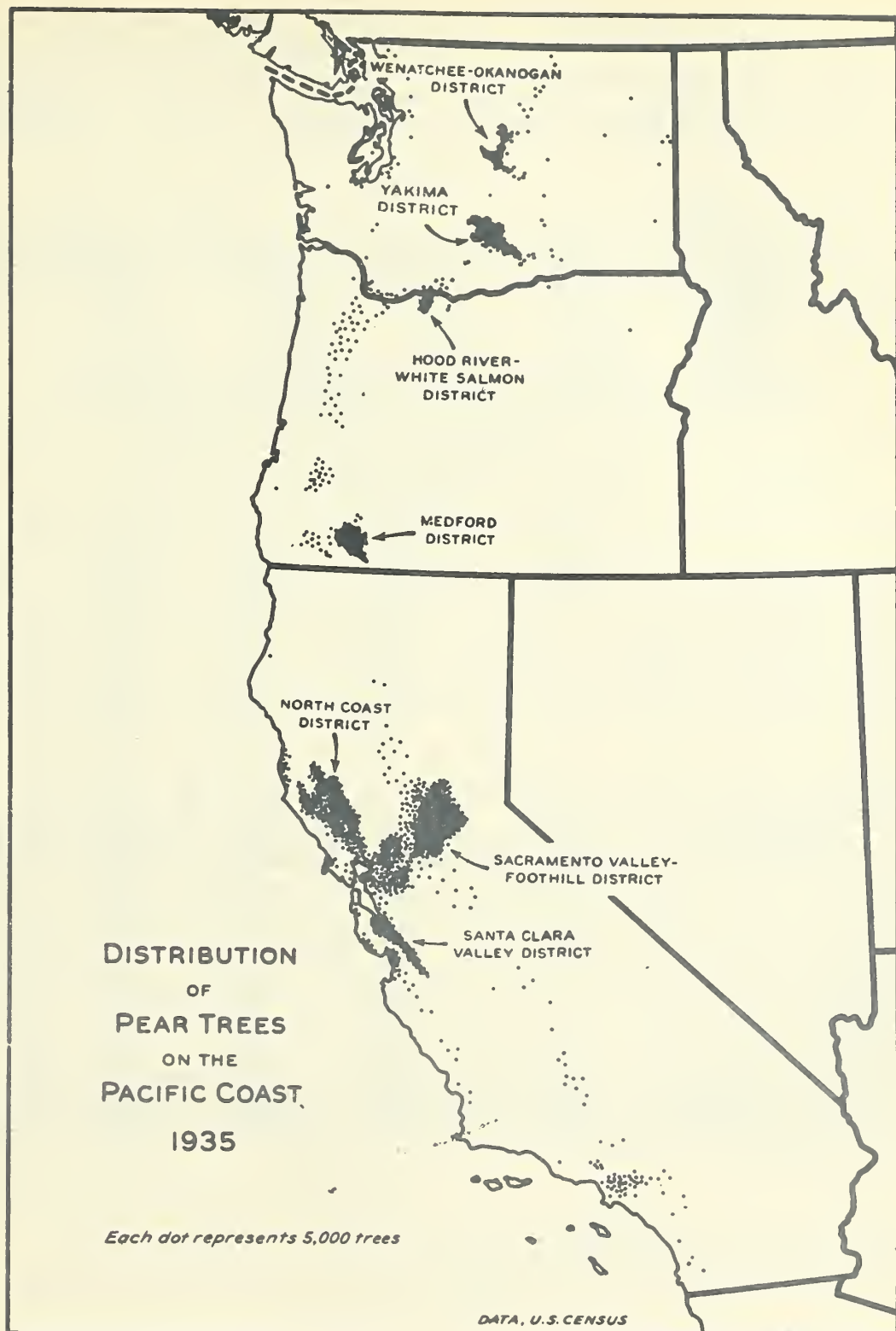
Commercial pear production in the United States has shifted from the Eastern to the 3 Pacific Coast States in the past 30 years. California, Oregon and Washington, which accounted for only 48 percent of the 1919 pear crop, provided 69 percent of the total in 1938. Most of the increase in United States production during this period, in fact, took place in the Pacific pear regions. Outside of New York and Michigan, pear production in the Eastern and Midwestern States is of minor commercial importance.

This shift has been accompanied by greater specialization in production and higher average yield per tree. As a result, production has increased despite a sustained downward trend in national tree numbers. Total tree numbers in 1935 amounted to 19,434,000 compared with 23,975,000 trees in 1910. During this period, increased plantings in the Western States was not sufficient to offset declines in the eastern pear regions. Damage resulting from pear blight and psylla together with the growing competition from the Pacific Coast States were the chief factors responsible for the decline in tree numbers in the east. In these areas, old and injured trees, particularly of unprofitable varieties and in small farm orchards, have been gradually removed, and replacements have been mostly in commercial orchards. Despite the decline in total tree numbers, the number of bearing trees in 1935 totaled 16,694,000 or about 1,500,000 more than the number reported in 1910.

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3/ The pear-exporting countries of Europe are included in the following section of this report.





Practically the entire export movement of pears originates in the three Western States. The principal areas producing pears that move into export are the Santa Clara and adjacent Valleys and the Foothill Region of the Sierra Mountains in California, the Medford and Hood River districts in Oregon and the Underwood-White Salmon, Yakima, and Wenatchee districts in Washington.

### Exports

Exports of fresh pears from the United States have expanded rapidly in the past 15 years and reached a record high of 3,419,000 bushels during the 1938-39 season. During the period, 1926-27 to 1930-31, exports averaged only 1,618,000 bushels.

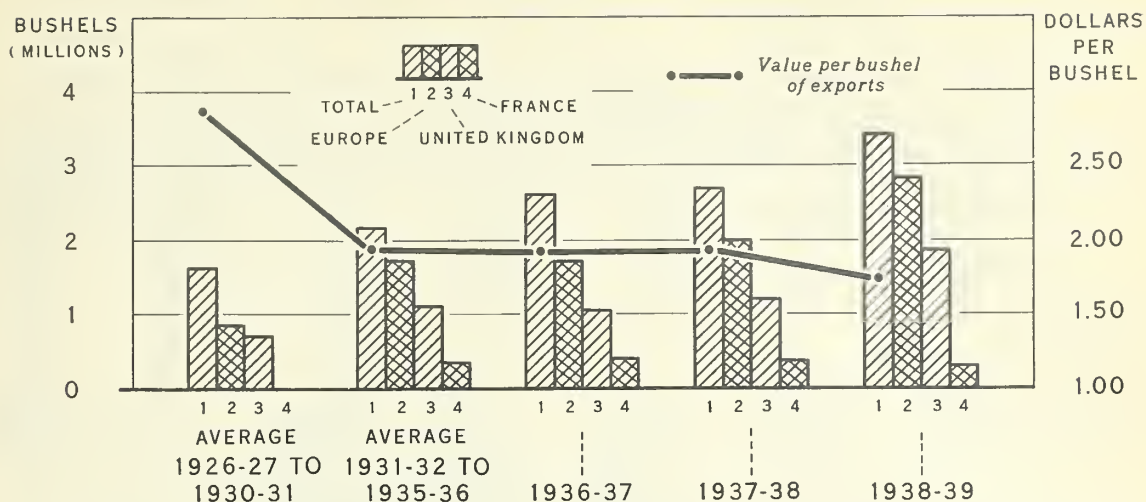
UNITED STATES: Exports of fresh pears by principal countries of destination, July to June, averages 1926-27 to 1930-31, 1931-32 to 1935-36, annual 1936-37 to 1938-39

Country	Averages		1936-37	1937-38	1938-39
	1926-27 to 1930-31	1931-32 to 1935-36			
	1,000	1,000	1,000	1,000	1,000
	<u>bushels</u>	<u>bushels</u>	<u>bushels</u>	<u>bushels</u>	<u>bushels</u>
United Kingdom.....	721	1,104	1,064	1,197	1,892
France.....	7	339	392	373	305
Netherlands.....	53	138	116	137	283
Germany.....	34	44	24	59	56
Belgium.....	5	7	21	51	72
Sweden.....	24	75	120	153	172
Norway.....	1	6	6	8	24
Finland.....	a/	8	26	28	44
Denmark.....	3	11	a/	1	2
Other Europe.....	2	1	4	2	10
Total Europe...	850	1,733	1,773	2,009	2,860
Canada.....	543	275	559	358	270
Mexico.....	15	3	8	13	11
Cuba.....	34	15	27	30	28
Argentina.....	36	22	8	7	10
Brazil.....	94	64	105	92	94
Palestine.....	a/	18	41	27	20
Egypt.....	a/	19	51	81	65
Others.....	46	37	54	77	61
Total ex-Europe..	768	453	853	685	559
Total all countries..	1,618	2,186	2,626	2,694	3,419

Compiled from official records of the Bureau of Foreign and Domestic Commerce.

a/ Less than 500 bushels.

## UNITED STATES: EXPORTS OF FRESH PEARS



U. S. DEPARTMENT OF AGRICULTURE

NEG. 38292

OFFICE OF FOREIGN AGRICULTURAL RELATIONS

The marked expansion in exports, however, has been accompanied by an appreciable decline in the average value per bushel of the exports. Values averaged \$1.91 per bushel during the 5 years, 1931-32 to 1935-36, compared with an average of \$2.87 per bushel during the preceding 5 years. The average value of \$1.82 per bushel during the past 3 seasons is even below the average for the 1931-32 to 1935-36 period.

European importing countries accounted for 84 percent of total American exports in 1938-39. The United Kingdom, the principal importing country, took around 55 percent of the total, followed by France and the Netherlands with 9 and 8 percent respectively. The Scandinavian countries, and particularly Sweden, are also important importers of American pears, and these countries together accounted for 7 percent of the movement during 1938-39. The quantity of American pears moving directly to central Europe, on the other hand, has never been very important. Small quantities of American pears are also re-exported by Belgium, the Netherlands, and France into the Central European countries. The United States pear industry has also built up substantial markets outside of Europe, particularly in Egypt and Palestine, and in Brazil, Cuba, and Canada. Concessions granted to pear exports under the Trade Agreements Program have assisted in the expansion of our exports over the past few years.

### The United States export movement

The harvesting of United States pears that move into export begins with the California Bartletts, which are usually picked during July and August. The late varieties are harvested chiefly between July or August and the middle of



October. 4/ Bartlett pears are usually moved directly to market from July to September, while late varieties are placed in cold storage and marketed from July or August until the following June.

UNITED STATES: Estimated exports of pears by varieties, July to June, 1934-35 to 1938-39

Reported exports of late pears a/							
Season :	Hardy :	Comice :	Bosc :	Winter Nelis :	Anjou :	All Others :	Total :
	1,000	1,000	1,000	1,000	1,000	1,000	1,000
	boxes	boxes	boxes	boxes	boxes	boxes	boxes
1934-35..:	287	122	20	441	434	75	1,379
1935-36..:	209	76	40	492	701	91	1,609
1936-37..:	363	181	40	525	631	49	1,789
1937-38..:	240	82	63	539	915	34	1,873
1938-39..:	869	218	101	723	727	22	2,660
Average..:	393	136	53	544	681	55	1,862

Estimated total exports of late pears b/							
	Hardy	Comice	Winter Nelis	Anjou	Total c/	Bartletts d/	Total exports e/
1934-35..:	365	144	482	508	1,555	458	2,013
1935-36..:	255	81	592	817	1,858	625	2,483
1936-37..:	370	200	556	651	1,877	749	2,626
1937-38..:	353	88	602	933	2,020	674	2,694
1938-39..:	917	219	724	728	2,692	727	3,419
Average..:	452	146	591	727	2,000	647	2,647
Percentage of Total:	Percent 17.1	Percent 5.5	Percent 22.3	Percent 27.5	Percent 75.6	Percent 24.4	Percent 100.0

Compiled from unpublished data prepared by H. H. Stippler, Fruit and Vegetable Division, Surplus Marketing Administration, United States Department of Agriculture.

a/ Reports of individual shippers to the Winter Pear Control Committee or to the General Crops Section. Data for earlier seasons incomplete.

b/ Reported export shipments corrected for incompleteness.

c/ Includes Bosc and other minor varieties.

d/ Assumed to be the difference between estimated late-pear exports and total exports. Includes some eastern pears.

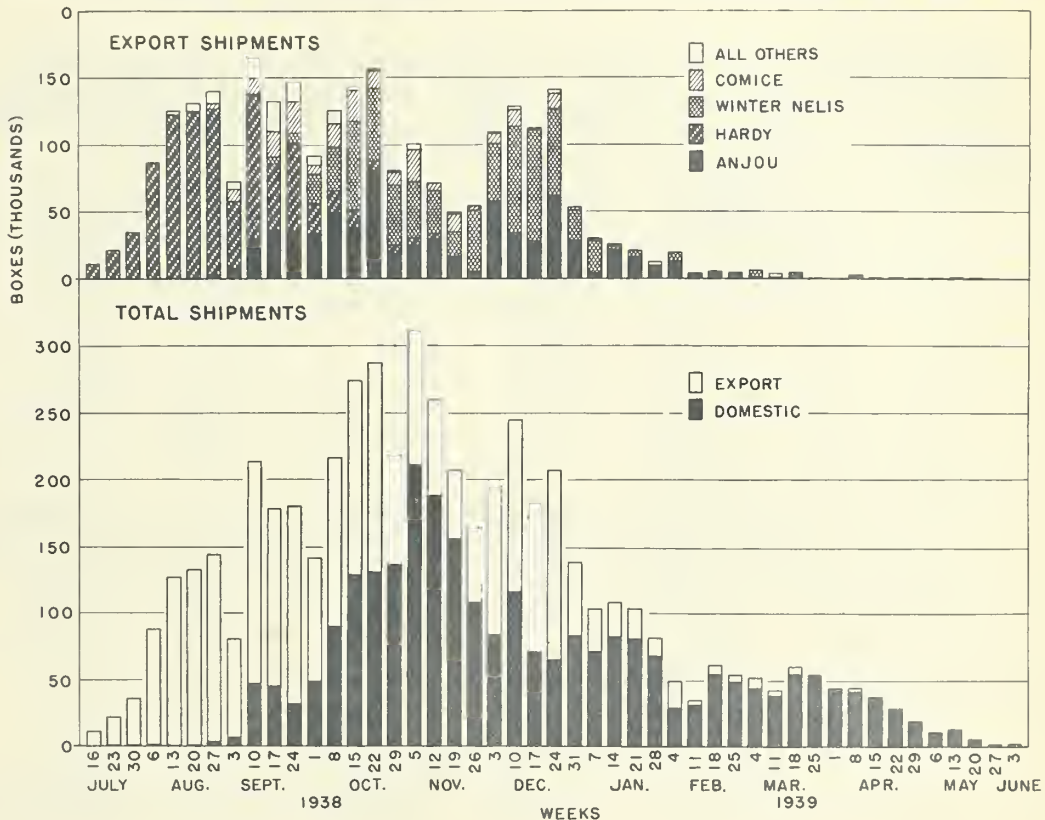
e/ Exports as reported by the Bureau of Foreign and Domestic Commerce. Converted to bushels of 50 pounds.

4/ The principal varieties of late pears and their normal domestic marketing periods are as follows: Hardy, August to October; Bosc, September to January; Comice, November to February; Anjou, November to May; and Winter Nelis, December to June.



According to calculations based on reports made by the industry under various marketing programs to the Fruit and Vegetable Division of the Surplus Marketing Administration and export statistics as reported by the Bureau of Foreign and Domestic Commerce, winter pears accounted for about three-fourths of American pear exports during the past five seasons. The Anjou was the most important export variety, amounting to about 28 percent, followed by Winter Nelis with 22, and Hardy with 17 percent of total fresh-pear exports. Shipments of West Coast Bartlett pears, together with minor quantities of eastern pears, accounted for about one-fourth of the exports during this period. 5/

UNITED STATES: WEEKLY SHIPMENTS OF PACIFIC COAST LATE PEARS, 1938-39 SEASON



5/ In a study made of export-form certificates issued on Pacific Coast Bartletts in the 1928-29 season, Bartletts represented around 18 percent of the total West Coast pears for which export forms were issued. (See "Monthly Statistics Relating to Apple Exports," a supplement of "Summary of Apple and Pear Export Season, 1933-34," prepared under the supervision of A. C. Edwards and released by the Bureau of Agricultural Economics.) Unfortunately, no figures are available showing the proportion of pears for which export-form certificates were issued that actually moved into export. The volume of pears on the West Coast for which export-form certificates were issued, however, was almost double the volume of actual exports during that season.

The bulk of American pear exports moves out between August and December. The Bartlett movement is heaviest in July and early August, while the bulk of Hardies moves in late July, August, and early September. September and October are usually the peak months for exports of Anjou, Bosc, and Comice varieties, while Winter Nelis moves in heaviest volume during October and November.

During the 5 years, 1934-35 to 1938-39, the bulk of Hardy pear exports moved to the United Kingdom, while important markets for Anjou shipments were France, the Netherlands, the United Kingdom, Egypt, Sweden, and Brazil. Comice moved principally to the United Kingdom, France, and Cuba, and export of Winter Nelis pears went to the United Kingdom and Sweden.

UNITED STATES: Distribution of export shipments of Pacific Coast late pears, total and major varieties, average 1934-35 to 1938-39

Country	:Total of all varieties :		Exports by major varieties				
	:	:Percentage :	:	:	:	:	: Winter
	:	: of total	: Hardy	: Comice	: Anjou	: Nelis	
	:	: Percent	: Boxes	: Boxes	: Boxes	: Boxes	
United Kingdom....	:	49.28	:356,557	: 63,735	: 56,061	:391,457	
France.....	:	16.36	: 7,472	: 47,667	:230,788	: 4,166	
Netherlands.....	:	7.44	: 9,776	: 4,586	:114,559	: 5,650	
Germany.....	:	1.13	: 0	: 0	: 19,189	: 1,892	
Belgium.....	:	1.33	: 0	: 0	: 24,372	: 256	
Sweden.....	:	6.72	: 1,434	: 192	: 40,414	: 78,515	
Norway.....	:	0.61	: 0	: 256	: 748	: 10,197	
Finland.....	:	1.12	: 708	: 85	: 4,439	: 9,461	
Other Europe.....	:	.65	: 0	: 0	: 6,830	: 3,555	
Total Europe....	:	84.64	:375,947	:116,521	:497,400	:505,149	
Canada.....	:	0.96	: 550	: 0	: 5,407	: 9,894	
Mexico.....	:	0.21	: 0	: 270	: 2,352	: 776	
Cuba.....	:	0.99	: 404	: 12,823	: 3,981	: 0	
Argentina.....	:	0.22	: 384	: 0	: 3,358	: 0	
Brazil.....	:	2.22	: 1,024	: 38	: 38,263	: 0	
Palestine.....	:	1.13	: 1,920	: 46	: 17,916	: 174	
Egypt.....	:	2.39	: 1,138	: 14	: 41,081	: 0	
Others.....	:	7.24	: 12,093	: 6,112	: 71,576	: 28,057	
Total ex-Europe..	:	15.36	: 17,513	: 19,303	:183,934	: 38,901	
Total all	:	:	:	:	:	:	
countries....	:	100.0	:393,460	:135,824	:681,334	:544,050	

Compiled from a report of the Surplus Marketing Administration, United States Department of Agriculture.

These figures have not been corrected for diversions, transit shipments, or reexports. In a number of instances, the destination of exports is altered after the ship leaves the port of export. The Netherlands, Belgium, Sweden, and, to a lesser extent, the United Kingdom, reexport American pears to other European markets. Transit shipments are of importance chiefly with reference to the Netherlands.

Hardy pears are produced in California only, and exports come entirely from that state. The Hood River and Medford sections of Oregon and the Yakima-White Salmon district in Washington contributed the major portion of the exports of Anjous. The small volume of Bosc shipments came almost entirely from Hood River and from the California producing district; Comice from the State of California and the Medford district; and Winter Nelis from Yakima, Washington, and the State of California. The California districts supplied 38 percent of the total United States winter-pear exports during the 5-year period cited, followed by the Yakima district with almost 30 percent, and the Hood River and Medford districts of Oregon with around 13 percent each.

UNITED STATES: Export shipments of Pacific Coast late pears, by varieties and producing districts, average 1934-35 to 1938-39

Variety	: Total Pacific Coast		: Percentage of total exports originating in					
	: Percentage:		Calif. :	Oregon :	Washington			
	Export :	of total :	all :	Med-:	Hood :	Yakima :	Wenat-	
		shipments:	districts:	ford :	River :	a/ :	chee	
	Boxes :	Percent :	Percent :	cent :	cent :	Percent :	Percent	
Hardy.....	393,460 :	92.1 :	100.0 :	0 :	0 :	0 :	0	
Comice.....	135,824 :	62.3 :	66.3 :	31.6 :	1.8 :	b/ :	.3	
Bosc.....	52,887 :	6.4 :	44.5 :	7.3 :	45.4 :	2.8 :	0	
Winter Nelis..	544,050 :	74.1 :	29.3 :	3.8 :	1.8 :	64.7 :	.4	
Anjou.....	681,335 :	42.9 :	4.7 :	22.2 :	30.1 :	27.2 :	15.8	
Minor :	:	:	:	:	:	:	:	
varieties..	54,320 :	23.0 :	19.8 :	25.0 :	8.6 :	24.3 :	22.3	
Total all :	:	:	:	:	:	:	:	
varieties..	1,861,875 :	46.2 :	38.1 :	12.5 :	13.2 :	29.7 :	6.5	

Compiled from a report of the Surplus Marketing Administration, United States Department of Agriculture. These figures represent the following estimated total packout: Hardy 87.2 percent; Comice 92.6; Bosc 95.5; Winter Nelis 91.9; Anjou 93.9; and total all varieties 92.9 percent.

a/ Includes Underwood-White Salmon district.

b/ Less than one-half of one percent.

During the late summer and fall months American pears are faced with the competition of minor quantities of European and Canadian pears in the United Kingdom and of European pears in the continental importing countries. Home-grown pears in most European countries as a rule are inferior to the American product in quality and pack, but the volume of the home-grown fruit (and imported European pears) offered during this period has some effect on both the imports of, and the prices realized on, American pears in the various



European markets. Supplies of other kinds of home-grown and imported fruit, of course, have an indirect effect upon imports of United States pears.

Pears produced in Southern Hemisphere countries compete primarily with exports of late winter pears from the United States after January. South American pears, which begin to arrive in volume in the United Kingdom during January and early February, offer the first competition that American pears encounter from Southern Hemisphere producers. Argentine pears begin to arrive in February and shipments from Australia and New Zealand during March. The expansion of production and exports in the Southern Hemisphere countries in recent years has materially affected the marketing of American pears in Europe after the turn of the year. As an example, offerings of Argentine Williams had a distinctly unfavorable effect upon imports of American Anjous into France during the spring of 1939.

#### Importance of fresh-pear exports

Between 9 and 14 percent of that portion of the total United States pear crop available for consumption as fresh fruit has moved into export in the fresh state annually since the 1931-32 season. Around 21 percent of that part of the pear crop in the Pacific Coast States which was utilized as fresh fruit moved into markets outside this country. Although the larger proportion of the West Coast pear crop is of the Bartlett variety, late varieties represent between 65 and 70 percent of the United States exports.

Foreign markets absorb almost half the production of fall and winter pears produced on the Pacific Coast. Exports during the 5 years, 1934-35 to 1938-39, averaged 46 percent of the Pacific Coast production of these pears. Statistics of shipments indicate that the proportions of the crops of leading winter varieties that moved into export during this period were: Hardy 92 percent; Winter Nelis 74; Comice 62; Anjou 43; and Bosc 6 percent. The export outlet, therefore, has been of primary importance in the marketing of American pears, particularly of certain late winter varieties.

UNITED STATES: Percentage of total reported shipments of Pacific Coast late pears that moved into export, by principal districts, 1934-35 to 1938-39

District	: 1934-35:	: 1935-36:	: 1936-37:	: 1937-38:	: 1938-39:	: Average 1934-35 to 1938-39
	: Percent:	: Percent:	: Percent:	: Percent:	: Percent:	: Percent
California:	:	:	:	:	:	:
All districts.....	53.8	64.0	62.9	65.3	81.4	67.8
Oregon:	:	:	:	:	:	:
Medford.....	28.6	20.5	28.1	21.3	13.9	22.1
Hood River.....	30.6	41.3	31.9	44.0	30.5	36.5
Washington:	:	:	:	:	:	:
Yakima a/.....	64.7	68.3	52.2	59.6	62.4	61.7
Wenatchee.....	26.4	27.4	40.7	38.0	33.0	33.6
Total Pacific Coast..	44.9	45.1	44.4	44.7	50.3	46.2

Compiled from unpublished data prepared by the Surplus Marketing

Administration, United States Department of Agriculture.

a/ Includes Underwood-White Salmon district.



The importance of the export market to the principal West Coast late-pear producing regions is shown in the table on page 20. During the 5 years, 1934-35 to 1938-39, around 68 percent of the total shipments of late pears from the districts in the State of California moved into export markets and 62 percent from the Yakima district. Around 36.5 percent of the movement from Hood River, 33.5 percent from Wenatchee, and 22 percent from Medford was shipped to foreign markets.

In the immediate future, disruption of the export market, as a result of the European war, will become increasingly important to the American pear industry, since the prospective increase in American production is chiefly in late varieties. Around 70 percent of the 1939 pear crop on the West Coast consisted of Bartletts and approximately 30 percent of fall and winter varieties. Production of Bartlett pears in the western region is expected to be only slightly greater during the next few years than the average production during the 1934-1938 period. Production of fall and winter varieties, on the other hand, probably will continue its present rate of increase because a large proportion of plantings are just coming into bearing or are approaching full-bearing size. Although new plantings are small, higher average yields per tree indicate increases in production of late pears in the very near future, particularly in Oregon and Washington. 6/

### Argentina

The phenomenal rise of Argentina as an important producer and exporter of pears has been one of the more important developments in the world situation during the past few years. In 1938-39 Argentina was second only to the United States as an exporter of fresh pears, while the country was seventh in importance in the 1931-32 to 1935-36 period.

### Production

The increase in plantings in Argentina has been extremely rapid; for instance, the number of trees in the Rio Negro Valley, the principal producing region in the country, increased about 22 percent between 1932 and 1935, according to census returns. In Mendoza, the other important producing area, the increase in tree numbers was about 18 percent between 1932 and 1938. Production has expanded at a similarly rapid rate. The commercial pear crop in 1932 was estimated at around 391,000 bushels, whereas in 1938 a crop of 2,374,000 bushels was produced.

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6/ "The Pear Outlook for 1940," United States Department of Agriculture, November 13, 1939, p. 2.

## Development of the industry

The commercial pear industry of Argentina is centered in two principal producing areas, the Rio Negro Valley and the Province of Mendoza. The fruit is grown under irrigation in both regions and the supply of water is provided by streams that originate from the melting snows of the Andes Mountains. In the Rio Negro Valley, commercial production may be said to have begun in 1921 with the completion of the irrigation system by the Government. Poor grading and packing hindered the development of the domestic industry in the face of competition from superior imported pears. As a consequence, the Argentine Fruit Distributors, Limited, was established in 1928, as a subsidiary of the Great Southern Railway, which serves the Valley, to improve the packing and marketing of Argentine fruit.

This company has been a leader in the reorganization that has taken place in the Argentine industry since 1928. American-type packing houses were built at strategic points, and experienced fruit packers were employed as managers. Facilities for marketing the fruit have been improved and expanded, and the rapid increase of exports in recent years reflects the progress which has been made in this field.

Production in Mendoza has also increased sharply, though the expansion has been much less marked than in the Rio Negro Valley. Mendoza is primarily a grape-producing area and the various tree fruits account for only 7 percent of the area under cultivation. Based upon freight loadings, the Mendoza region accounted for around 23 percent of the production in Argentina in 1938 compared with 74 percent from the Rio Negro Valley. In 1932, on the other hand, Mendoza accounted for 37 percent of the total while the Rio Negro Valley provided 46 percent. The Delta district near Buenos Aires is a minor producing district. The volume of pear production in this section is small and the quality of the fruit rather poor.

## Exports

Argentine exports have shown a marked expansion during the past decade. Shipments during the 5 years, 1926-27 to 1930-31, averaged only 13,000 bushels, compared with the movement of 1,245,000 bushels in 1938-39.

In contrast to the British Dominions, Argentina has not marketed the bulk of its pear exports in any single overseas market. Exports have been scattered among 5 principal markets: the United Kingdom, France, Brazil, Sweden, and the Netherlands. The United Kingdom, the most important export outlet, took only 23 percent of the total movement in 1938-39, while France accounted for 22.5 percent, Brazil for 17 percent and Sweden for 15 percent. During 1939, shipments to the United States amounted to less than 1 percent of Argentine exports. The European war, however, reduced the volume of Argentine exports and resulted in a heavier movement to this country in the spring of 1940. As long as the war continues, the United States will probably

be expected to absorb a much heavier volume than heretofore. Imports into the United States in the spring of 1940 amounted to 219,000 bushels. The bulk of Argentine pears move out between January and March and arrive in export markets between February and May.

ARGENTINA: Exports of pears by principal countries, calendar years, averages 1927 to 1931, 1932 to 1936, annual 1937 to 1939 a/

Country	Averages		1937	1938	1939
	1927 to 1931	1932 to 1936			
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
United Kingdom.....	.8	61.1	168.8	234.5	289.7
France.....	b/	12.1	127.5	203.2	281.2
Netherlands.....	.2	3.1	3.2	13.5	107.0
Belgium.....	c/	1.3	10.8	12.7	32.7
Sweden.....	b/	5.2	48.5	105.5	191.9
Switzerland.....	c/	2.5	4.0	0	12.8
Italy.....	b/	.8	1.5	9.9	2.8
Germany.....	b/	1.1	0	.7	0
Brazil.....	10.9	58.1	134.0	174.2	210.8
United States.....	.3	3.1	64.3	37.8	85.3
Others.....	.5	10.8	9.8	13.4	31.1
Total.....	12.7	159.2	572.4	805.4	1,245.3

Compiled from official sources. Bushels of 50 pounds.

a/ The Argentine shipping season, January to June 1937, for example, compares with the United States shipping season of July to June, 1936-37.

b/ Less than 50 bushels.

c/ If any, included in "Others."

Argentine pears are outstanding from a quality and pack standpoint among the Southern Hemisphere fruit that is marketed in the spring months. Packing techniques adopted by the Argentine industry have been patterned after the methods developed in the Pacific Coast States. From the point of view of quality, appearance, and pack, Argentine pears probably more nearly approach the standards that have been established by our Western States than do fruit from most other competing regions.

#### Other Exporting Countries

Production and exports from the other surplus-producing countries outside Europe have expanded appreciably since the World War. Australia and South Africa in particular have become more important factors in the world situation. Although these countries accounted for only 3 percent of the world crop in 1937-38, they provided about 17 percent of reported exports.



## Australia

Production of pears in Australia has expanded steadily during the past 20 years. The crop averaged 2,020,000 bushels during the 5 years, 1931-32 to 1935-36, an increase of about 38 percent over the average harvest during the 5-year period, 1921-22 to 1925-26. The bulk of the expansion in production has taken place in the State of Victoria, which accounts for over 55 percent of the Australian crop. New South Wales, Tasmania, and South Australia follow in order as producers of the fruit. Between 20 and 30 percent of the Australian crop moved overseas as fresh fruit in recent years.

The increase in production since the early 1920's has been due to heavier bearing of the trees rather than to a marked expansion in plantings. Yield per acre in 1936-37, for example, has been estimated at 153 bushels compared with an average of 86 bushels per acre during the 1921-22 to 1925-26 period.

Victoria and Tasmania provide the bulk of Australian exports of pears. The important export varieties from the mainland of Australia are Packham, Hardy, Howell, Kieffer, and Josephine. The major export varieties from Tasmania are Bosc, Packham, Comice, Beurre de Caproument, and Clairgeau. Exports from the mainland are normally heaviest during April, May, and June, while those from Tasmania move in May and June.

Exports of pears from Australia in recent years have risen much more rapidly than has production. An average of about 173,000 bushels moved into export during the 5 years, 1926-27 to 1930-31, compared with an average of 446,000 bushels during the following 5 years. The marked expansion of exports may be directly attributed to the coincidence of heavier production with the inauguration of imperial preference by the United Kingdom following the Ottawa Conference in 1932. Exports increased rapidly after 1932, rising from an average of 212,000 bushels in the preceding 5 seasons to an average of 529,000 bushels in the subsequent 5 years, while production increased around 30 percent.

The Australian pear industry has depended upon the United Kingdom market to absorb practically its entire export. Prior to the inauguration of imperial preference, the United Kingdom took almost 90 percent of Australia's pear exports, and since 1932 has accounted for between 91 and 96 percent of the total. Minor quantities of Australian pears, however, move to certain markets in the Orient.

The pear movement from Australia begins in February, reaches a peak in April, and is usually ended in June. Arrivals in the United Kingdom are heaviest between April and June. Since United States pear shipments to Britain during this period are negligible, Australia is not an important competitor of American exports. The last Australian pears, however, are offered in the British markets during July when the California Bartlett season gets underway.



PEARS: Exports from specified Southern Hemisphere countries, by principal destination, averages 1927 to 1931, 1932 to 1936, annual 1937 to 1938

Country	Averages		1937	1938 <u>a/</u>
	1927 to 1931	1932 to 1936		
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
<u>Australia:</u>				
United Kingdom.....	154	415	639	481
Germany.....	12	11	3	9
Orient <u>b/</u> .....	6	13	15	17
Others.....	1	7	17	10
Total.....	173	446	674	517
<u>New Zealand:</u>				
United Kingdom.....	29	83	32	
Others.....	3	2	1	
Total.....	32	85	33	
<u>South Africa:</u>				
United Kingdom.....	241	418	358	344
France.....	0	9	37	11
Germany.....	<u>c/</u>	2	10	15
Sweden.....	0	19	42	31
Others.....	10	30	58	45
Total.....	251	478	505	446
<u>Chile:</u>				
Peru.....	<u>c/</u>	2	6	7
United States.....	<u>c/</u>	1	1	3
France.....	<u>d/</u>	1	3	3
Brazil.....	<u>d/</u>	6	4	0
Others.....	2	2	7	4
Total.....	2	12	21	17

Compiled from official sources. Bushels of 50 pounds. Exports from South Africa partially estimated. The Southern Hemisphere calendar year coincides with the previous year for Northern Hemisphere countries. For example, the 1937 season for Australia compares with the 1936 season for Italy and the 1936-37 season for the United States.

a/ Preliminary.

b/ Includes British Malaya, Netherland East Indies, Hongkong, and China.

c/ Less than 500 bushels.

d/ If any, included in "Others".

## New Zealand

Pear production in New Zealand has been increasing at a moderate rate during the past 20 years. Production in 1936-37 totaled 251,000 bushels, compared with an average of 146,000 bushels during the 5 years, 1921-22 to 1925-26. The number of bearing trees during this period has remained relatively constant, totaling 138,000 in 1936-37 compared with an average of 146,000 in the earlier period; but the number of nonbearing trees has declined considerably. Pear growing is a subsidiary activity with most New Zealand orchardists, since the bulk of the land is usually planted to apples and stone-fruit.

Hawkes Bay and Nelson, the principal pear-growing areas, normally provide more than 80 percent of the oversea movement. The principal export variety is the winter Cole, a midseason pear, followed by Bosc and Winter Nelis.

Although the Government has given financial assistance to encourage fresh-pear exports since 1911, the volume of this movement did not begin to expand until after the world war. Since the early 1920's, however, exports have risen rapidly, increasing from 1,300 bushels in 1921 to a record volume of 103,000 bushels during the 1933 season. Practically the entire oversea movement goes to the United Kingdom, which absorbed, between 1931-32 and 1935-36, an average of 98 percent of the exports. The New Zealand shipping season coincides with that of Australia.

## South Africa

Although no production estimates are available, a considerable expansion in production in South Africa during the past two decades is indicated by the increase in tree numbers and in exports. In 1937 about 1,111,000 commercial pear trees were in the country, compared with 788,000 trees in both commercial and noncommercial orchards in 1918. The number of commercial trees was relatively stationary during the 1920's, but a slight expansion occurred between 1930 and 1936.

South African pear production is located principally in the interior valleys of the western Cape Province near Capetown. On the basis of tree numbers, Ceres, Hex River, Groat, Drakenstein, and Stellenbosch, are the chief producing centers. In 1936 around 89 percent of the commercial trees in the Union were reported to be in Cape Province. Winter Nelis is the leading export variety of South African pears, followed by Bon Chretien (Williams), Kieffer, and Bosc.

Exports, which almost doubled between 1927-1931 and the subsequent 5 years, have increased at a more rapid rate than the expansion in plantings. Around 84 percent of South Africa's oversea shipments of pears has moved to

the United Kingdom since 1931, and the expansion of exports during the period can be attributed, to a considerable extent, to British imperial preference. During the past few years, South African exports to certain continental countries, particularly Sweden and France, have shown some expansion. The shipping season for South African pears is the 4-month period, January to April, with February and March the peak months.

#### Canada

Production of pears in Canada increased at a moderate rate during the past two decades. The crop averaged 449,000 bushels between 1931-32 and 1935-36, compared with an average of 296,000 bushels in the period, 1921-22 to 1925-26. British Columbia and Ontario are the principal producing Provinces, with a small production in Nova Scotia. Tree numbers have been declining, as in the United States. A total of 606,000 were reported in 1931, compared with 967,000 trees in 1911. Bearing trees constituted 75 percent of the total in 1931. According to the census of that year, 96 percent of the trees were in British Columbia and Ontario. The principal varieties produced include Bartlett, Flemish Beauty, Clapp's Favorite, Kieffer, Anjou, and Clairgeau.

Exports from Canada have amounted to between 50,000 and 75,000 bushels in recent years. Practically the entire export movement goes to the United Kingdom during the fall and early winter months.

#### Chile

The pear orchards of Chile are scattered from the Province of Tarapaca in the north to Valdivia in the south. The principal varieties are Bartlett, Beurre Quertier, Comice, Duchess, and Winter Nelis. The total production of pears for fresh consumption was officially estimated at 95,000 bushels in 1936. Official estimates for previous years are not available. The number of trees in Chile has dropped from 298,000 in 1929 to 112,000 trees in 1936.

Exports from Chile have been upward for a number of years, although the total continues small. The bulk of exports has moved to Peru and Brazil, with slight quantities going to the United States and France.

### EUROPEAN EXPORTING - IMPORTING COUNTRIES

The pear trade on the continent of Europe can be divided into two regional groupings: The countries of Western and Northern Europe and those in the central and southern part of the continent. Generally speaking, developments in the trade of the countries within these two groups have followed a rather similar pattern during the past 20 years.



During the past 2 decades, surplus-producing countries outside of Europe have become progressively more important in supplying the pear requirements of the western and northern group of countries. Imports into these countries have been increasing. The central and southern European area, on the other hand, can be considered as an almost self-contained unit. Exports, for the most part, move from surplus regions within this area into Germany and Austria. Producing regions outside of Europe supply only a very small portion of the pear imports of Central Europe.

### Western and Northern Europe

The countries in Western and Northern Europe accounted for 82 percent of total reported world imports in 1938. These countries can be divided into two groups. Belgium, the Netherlands, and France are both exporting and importing countries. On the whole, exports from these countries have declined during the past two decades, while imports have been expanding. The United Kingdom and the Scandinavian countries, on the other hand, are almost wholly importing countries, and the trend of imports has been upward. The surplus-producing regions outside of Europe sell the bulk of their export crops in the markets of Western and Northern Europe.

#### Belgium

Historically, Belgium has been important in the development of pear culture, and several varieties that are widely grown in the United States originated in that country. Pear growing has been an important phase of the country's agriculture for many decades, and, up to 1930, Belgium was the world's leading exporter of fresh pears. During the past 20 years, exports have declined drastically and, in recent years, imports have expanded rapidly.

Decline in exports - The sharp decline in exports from Belgium since 1926 has been one of the more significant developments in the world pear situation. Between 1926 and 1936, Belgium dropped from first to seventh place among the leading pear exporters, and the volume of the trade declined from 2,067,000 to 121,000 bushels.

The lack of comprehensive production data makes it more difficult to analyze the causes of the decline in exports. Prior to 1930, no production estimates are available. According to census returns, the total crop in 1930 amounted to 1,762,000 bushels. Production has been estimated at 2,124,000 bushels for 1935 and 1,710,000 bushels for 1936. Production in the 2 years, 1935 and 1936, averaged slightly more than the 1930 crop, while exports amounted to only 419,000 bushels compared with a movement of 1,398,000 bushels in 1930. It would appear, therefore, that decline in production was not the major factor responsible for the drop in shipments.

On the other hand, statistics on imports into Belgium's principal markets in Western Europe indicate that Belgian pears have been gradually replaced by heavier imports from producing areas outside of Europe. Total imports into the United Kingdom and France, for example, increased, while arrivals from Belgium decreased to negligible proportions. Total Dutch imports have trended only slightly downward, while imports from Belgium have practically ceased. In the case of Germany, imports from Belgium have dropped much more sharply than have total German imports. Thus, Belgium provided 24 percent of Germany's pear imports between 1926 and 1930 and only 3 percent in 1937.

It appears, therefore, that increased competition from non-European pears is, at least in the case of the markets of Western Europe, chiefly responsible for the severe drop in Belgium exports since 1926. This conclusion is strengthened by the fact that Belgian pears cannot compete in these markets, from a commercial point of view, with offerings from non-European sources. In the United Kingdom, for example, Belgian pears are now used chiefly for culinary purposes, while practically all the imported pears consumed as table fruit are of non-European origin.

BELGIUM: Exports and imports of pears by principal countries,  
calendar years, averages 1926 to 1930, 1931 to 1935,  
annual 1936 to 1938

Country	Averages		1936	1937	1938
	1926 to	1931 to			
	1930	1935			
	1,000	1,000	1,000	1,000	1,000
	bushels	bushels	bushels	bushels	bushels
Germany.....	595	229	16	32	a/
United Kingdom.....	905	427	73	93	1
France.....	93	113	29	13	b/
Netherlands.....	199	99	a/	a/	a/
Denmark.....	9	2	a/	a/	a/
Irish Free State.....	19	3	a/	a/	a/
Sweden.....	2	a/	a/	a/	a/
Switzerland.....	7	a/	a/	a/	a/
Others.....	20	11	3	2	1
Total exports....	1,849	884	121	140	2
United States.....	a/	5	70	84	159
Argentina.....	a/	a/	5	a/	a/
Netherlands.....	2	13	11	117	21
France.....	2	1	a/	a/	a/
Italy.....	a/	1	18	35	44
Others.....	1	2	c/ 44	14	50
Total imports....	5	22	148	250	274

Compiled from official sources. Bushels of 50 pounds.

a/ If any, included in "Others".

b/ Less than 500 bushels.

c/ Includes 32,346 bushels from Czechoslovakia.

The shipping season for Belgian pears is between August and November, with August and September the peak months. The principal export varieties include Clapp's Favorite, Bon Chretien (Bartlett), Triumph, Hardy, Conference, Comice, Legipont, and Belle du Louvain.

Imports - Imports of pears into Belgium have risen consistently during the past two decades. Imports averaged 5,000 bushels during the 5 years, 1926-1930, compared with 274,000 bushels during 1938. During the past three seasons, in particular, the rise has been substantial. The United States has been well represented in the increased arrivals, accounting for 58 percent of the total in 1938.

Consumption - As a result of decreased exports and heavier imports, consumption of pears in Belgium appears to have risen sharply in recent years. The British Imperial Economic Committee, for example, has calculated that the apparent per-capita consumption averaged 10 pounds in 1935-1936, compared with less than 2 pounds in 1927. 7/

#### Netherlands

The commercial fruit acreage in the Netherlands has been expanding for several decades and, according to official estimates, has risen almost 70 percent in the past 25 years. Actual production figures are not available but statistics on the sales of domestic pears by the auctions, which are available beginning with the 1932-33 season, give a fairly accurate indication of the commercial pear crop. Although total commercial fruit acreage has continued to expand, data based on auction sales do not indicate any marked expansion in pear plantings and production in recent years. The wide annual variations in production are principally the result of climatic conditions.

The expansion in fruit acreage, which has been particularly marked during the past few years, has been due primarily to special Government protection of the fruit industry. This protection consists of rather high import duties and, since 1933, a high monopoly import tax.

Exports - Exports of pears from the Netherlands have shown a steadily downward trend in recent years, though the low volume of exports in 1936 and 1938 was chiefly due to unusually short crops. This decline, however, has been at a much less rapid rate than that of Belgian exports.

Normally most of the Netherlands pear exports move to Germany. The bulk of these are grown in the extreme southern part of the Province of Limbourg, which is adjacent to the western industrial area of Germany. This trade is largely the result of the fact that it is easier to export these pears from

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7/ See "Apples and Pears," Imperial Economic Committee, London, 1938, p. 207.



Limbourg to Germany than to ship them to the large domestic markets in the western part of the Netherlands. The volume of the traffic to Germany in recent years has depended on the Netherland crop and on the quota allotted by Germany to pay for Netherland apples and pears. In 1937, exports to Belgium were unusually heavy. Pears are exported from the Netherlands between August and November, with September and October the peak months.

NETHERLANDS: Exports and imports of pears by principal countries, calendar years, averages 1926 to 1930, 1931 to 1935, annual 1936 to 1938

Country	Averages		1936	1937	1938
	1926 to 1930	1931 to 1935			
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
Exports:					
Germany.....	300	106	26	81	10
Belgium.....	6	3	5	126	5
United Kingdom....	44	14	a/	38	a/
France.....	4	23	5	8	a/
Others.....	15	2	1	2	a/
Total exports....	369	148	37	255	15
Imports:					
United States.....	13	94	117	59	200
Argentina.....	b/	1	10	4	16
South Africa.....	2	2	3	3	b/
Italy.....	11	13	9	2	8
Belgium.....	189	97	1	a/	2
Germany.....	13	24	a/	0	a/
United Kingdom....	7	12	7	6	3
France.....	2	1	1	0	20
Others.....	2	6	10	4	5
Total imports....	239	250	158	78	254

Compiled from official sources. Bushels of 50 pounds.

a/ Less than 500 bushels.

b/ If any, included in "Others."

Imports - Although the volume of imports fluctuates considerably from year to year, a downward trend has been apparent in recent years. Between 1926-1930 and 1931-1935 imports remained almost stationary, but they have declined during the last three seasons. Despite the downward trend in total imports, arrivals from the United States have been upward and the United States percentage of total imports reached a record high of 79 percent in 1938.

## France

France is one of the world's leading producers of pears, although the bulk of the crop consists of perry pears which are used largely for beverage purposes. According to figures that are partially estimated, the production of table pears in France has increased somewhat in recent years. The crops between 1936-37 and 1938-39 were relatively stationary at around 1,800,000 bushels. The perry crops have fluctuated considerably during this period but appear to have been abnormally heavy in 1936-37 and 1938-39.

Historically France has played an important role in the development of pear culture and probably more well-known varieties originated in that country than in any other. At present, however, France is a relatively minor producer of table pears. Although orchard production has expanded in recent years, farmyard production is, in general, typical of present-day pear culture. According to official statistics, over 70 percent of the pear trees in 1929 were scattered irregularly in small holdings, the remainder being orchard plantings. Probably over half the French crop is consumed on the farm and only a small proportion of the heavy perry pear crop normally moves to market.

The better French dessert pears originate in the Rhone and Loire Valleys and in districts adjacent to Paris, while the Rhone Valley, the Lower and Upper Rhine, and Moselle Valleys are the principal dessert and cooking pear districts. The bulk of the perry pear crop, and that of cider apples, are grown in the northwestern regions of Brittany and Normandy. The Williams, Comice, and Passe Crasanne are among the more important varieties produced in France.

Exports - Before the World War and during the early 1920's, France was a fairly important exporter of pears. Since 1929, however, the country has been a net importer of the fruit. Exports of table pears, particularly to the United Kingdom, have declined considerably since 1929. During the 2 years 1929 and 1930, shipments averaged 125,000 bushels. A substantial portion of the pears that were shipped to Britain originated in the Loire Valley, but this business has now disappeared. Since 1933, French exports to Britain have been small.

Imports - Between 1929-30 and 1934-35, French imports of pears increased more than twofold and imports from the United States rose twentyfold. Total imports since 1935 have been slightly below the 1931-1935 average, but the volume coming from the United States has risen during the past 3 years. In 1938, the United States accounted for nearly 57 percent of the total imports.

FRANCE: Exports and imports of table pears by principal countries, calendar years, averages 1929 to 1930, 1931 to 1935, annual 1936 to 1938

Country	Averages		1936	1937	1938 <sup>a/</sup>
	1929 to 1930	1931 to 1935			
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
Exports:					
United Kingdom.....	125	19	1	b/	23
Switzerland.....	25	11	4	10	19
Italy.....	19	1	b/	b/	b/
Algeria.....	8	16	8	9	11
Morocco.....	1	b/	b/	b/	b/
Others.....	18	4	c/	2	d/ 55
Total exports....	196	51	13	21	108
Imports:					
United States.....	12	255	377	261	321
Italy.....	35	67	28	50	b/
Netherlands.....	12	38	b/	b/	b/
Belgium.....	129	110	29	15	b/
United Kingdom.....	29	14	b/	b/	b/
Spain.....	25	31	b/	b/	b/
Germany.....	b/	23	b/	b/	b/
Argentina.....	b/	b/	57	120	207
South Africa.....	b/	3	26	38	b/
Others.....	13	20	35	28	40
Total imports....	255	561	552	512	568

Compiled from official sources. Bushels of 50 pounds.

<sup>a/</sup> Preliminary.

<sup>b/</sup> If any, included in "Others."

<sup>c/</sup> Less than 500 bushels.

<sup>d/</sup> Includes 37,000 bushels to Belgium and 10,000 bushels to the Netherlands.

### The United Kingdom <sup>8/</sup>

The United Kingdom is the world's largest importer of fresh pears, accounting for 55 percent of the world total in 1938. The British fruit markets are the most cosmopolitan in the world, and pears from practically every major producing country are represented there. It is the most important export market for the pear industry in the United States, Australia, New

<sup>8/</sup> Based in part upon an unpublished report by F. A. Motz, entitled "Pears on the United Kingdom Markets."



Zealand, South Africa, and Canada, and takes a substantial portion of the exports from Argentina. In former years, Britain was the principal customer of many European producing countries but these areas have been largely displaced in the British market by non-European producers during the past 10 years.

Production - The trend of production of pears in the United Kingdom appears to be slightly downward, although wide fluctuations in production from year to year, which are due in the main to climatic conditions, make it difficult to determine any positive trend. The bulk of the British crop consists of table and cooking pears, since perry pears usually account for only around 20 percent of the total crop, depending upon the season. Around 17,000 acres (approximately 2 million trees) are planted to pears and production is concentrated chiefly in Kent, Surrey, Hampshire, Worcestershire, Herefordshire, and Somerset. Since pear production is uncertain because of the weather, no marked expansion in plantings has taken place.

The principal varieties of British pears are Conference, Fertility, Comice, Marguerite Marrilat, Williams, and Bon Chretien (Bartlett). British pears are available from August to December, with September and October the peak months. Only a small portion of the British crop is of the quality and so graded and packed as to offer serious competition with the better imported product. During the fall, however, home-grown pears do fill a large portion of the requirements, particularly of the cheaper class of trade. During years of large crops, the availability of pears from home plantings reduces the demand for imported fruit, especially among consumers in the South of England. Domestic pear consumption, however, varies much less than production fluctuates, since imports increase with small domestic crops.

Imports - Although Britain is one of the more important European producers of table pears, imports usually account for around 75 percent of the country's gross consumption requirements. Imports between 1926 and 1937 were only slightly upward, averaging a little more than 2,500,000 bushels. In 1938, however, arrivals totaled over 3,000,000 bushels. Short British fruit supplies resulting from extensive frost damage in the spring of 1938 were chiefly responsible for the heavier imports.

Despite the fact that imports since 1926 have been fairly constant, considerable change has taken place in the relative importance of various producing areas in supplying British pear needs. Generally speaking, non-European producers have almost entirely supplanted European growers in the British market. Between 1926 and 1930, European producers supplied 57 percent of Britain's pear imports, compared with only 7 percent in 1937 and less than 1 percent in 1938.

Belgium was the most important supplier of pears between 1926 and 1930, but during the past decade, the United States has been the chief source of supply, accounting for over 40 percent of Britain's imports. In 1938 the

United States share reached the record level of 58 percent. British Dominions also have become increasingly important in shipping pears to Great Britain. The protection and competitive advantage of imperial preference and somewhat heavier production in the Dominions have been the principal factors responsible for this development.

UNITED KINGDOM: Imports of pears by principal countries, calendar years, averages 1926 to 1930, 1931 to 1935, annual 1936 to 1938

Country	Averages		1936	1937	1938
	1926 to 1930	1931 to 1935			
	1,000	1,000	1,000	1,000	1,000
	bushels	bushels	bushels	bushels	bushels
South Africa.....	148	284	419	314	306
Australia.....	139	400	539	666	460
New Zealand.....	30	89	100	38	93
Canada.....	107	92	58	62	113
Other British Countries..	6	4	1	2	4
Total British Countries:	430	869	1,117	1,082	976
Germany.....	58	18	7	6	a/
Netherlands.....	65	22	6	36	2
Belgium.....	996	439	70	84	1
France.....	242	24	2	2	17
Italy.....	46	62	34	62	27
Total European Countries:	1,407	565	119	190	47
United States.....	590	1,111	1,178	1,054	1,766
Argentina.....	a/	31	166	166	229
Other foreign countries..	25	6	5	2	2
Total foreign countries:	2,022	1,713	1,468	1,412	2,044
Total all countries..	2,452	2,582	2,585	2,494	3,020
Reexports.....	89	163	173	140	160

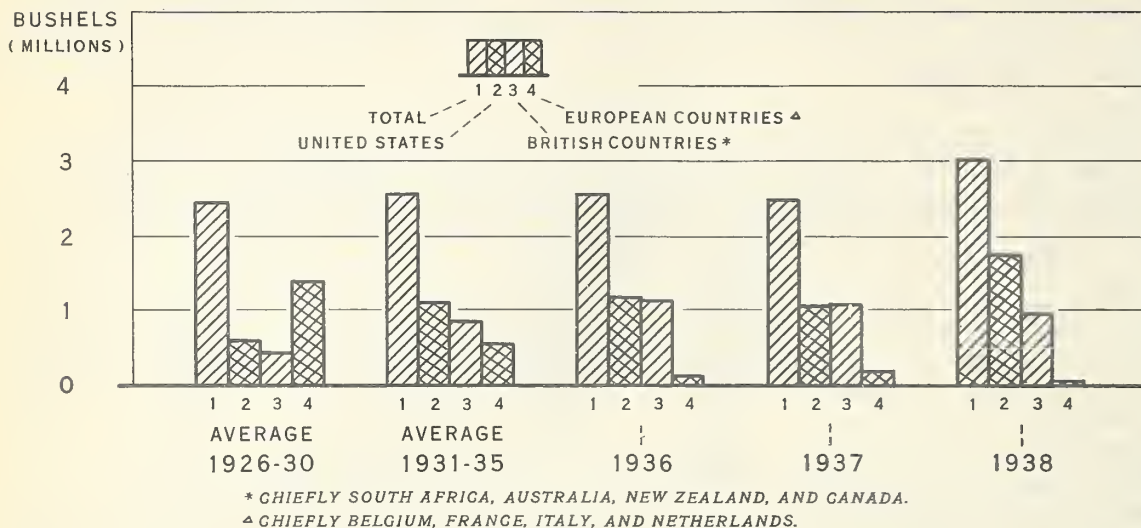
Compiled from official sources. Bushels of 50 pounds.

a/ If any, included in "Others."

b/ Includes total European and other foreign countries.

The British pear-marketing season - The United Kingdom is liberally supplied with pears throughout the year. The British pear-marketing season for imported supplies normally begins with the arrival of California Bartletts in July, before the domestic crop moves to market. Up to the first of the new year, American pears dominate the market from both a quantity and a quality point of view. English pears and imports from Canada and continental countries complete the supply picture during this period. American supplies are heaviest between September and November, though the season extends to March. During January and February the movement is small but significant.

## UNITED KINGDOM: IMPORTS OF PEARS BY PRINCIPAL COUNTRIES



U. S. DEPARTMENT OF AGRICULTURE

NEG. 38291

OFFICE OF FOREIGN AGRICULTURAL RELATIONS

The South African season begins in January and extends to May. The quality of South African pears on the whole has been good in recent years, though they have not attained the uniformly high standard which is associated with produce from the Pacific Coast. Generally speaking, they are not long-lived.

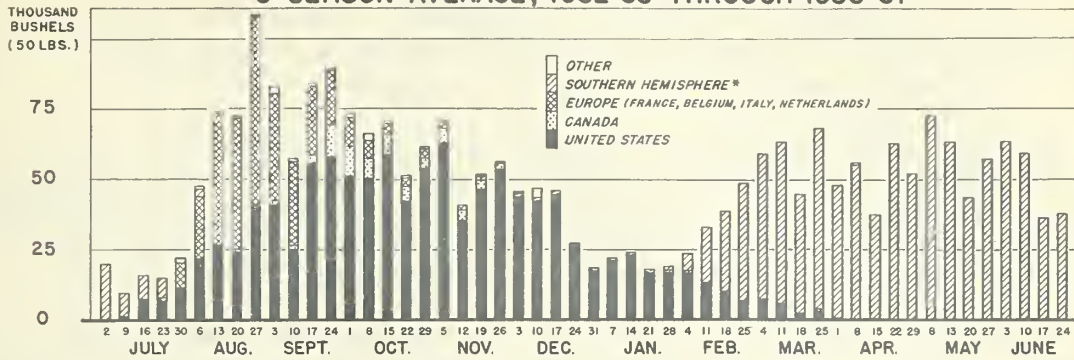
Argentine pears arrive during the 3 months, February to April, with March the month of heaviest arrivals. The bulk of these shipments consist of Williams (Bartlett) pears. These probably offer the stiffest competition that American pears encounter in foreign markets, from a quality and pack point of view. Arrivals on the whole have been in a marketable condition and their marketing life reasonably long.

Australian and New Zealand pears are unloaded between March and July, with April and May the peak months. The last of the produce from these Dominions is on the market in July when the first American Bartletts arrive. Early arrivals of Australasian pears frequently are in unsatisfactory condition and at a time when Argentine fruit is plentiful. As a consequence, prices for the early movement in recent years have not been considered satisfactory. As competitive supplies diminish, however, the market usually improves.

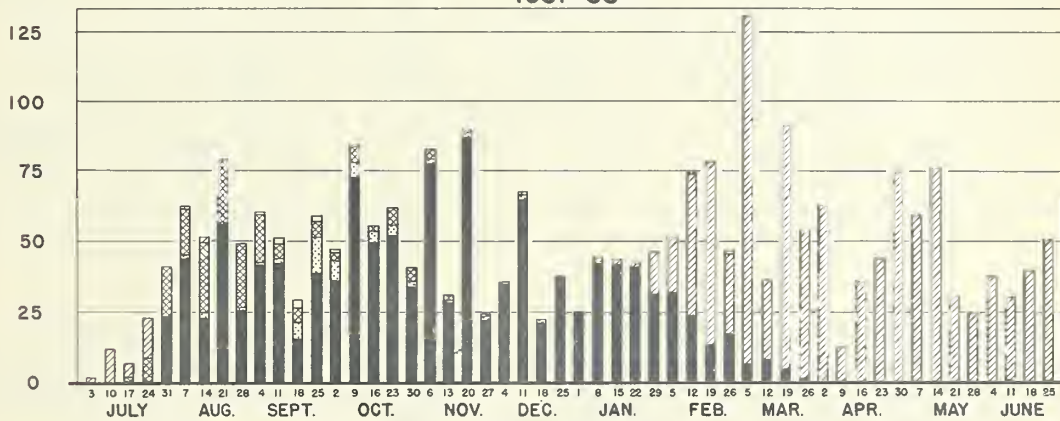


# UNITED KINGDOM: WEEKLY IMPORTS OF PEARS

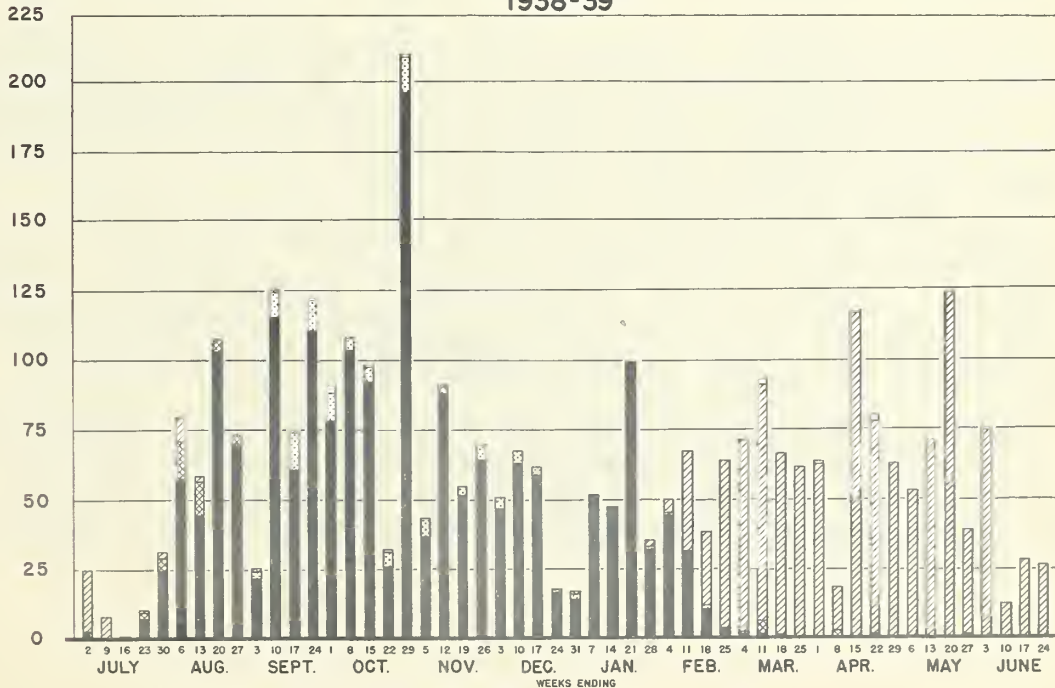
5-SEASON AVERAGE, 1932-33 THROUGH 1936-37



1937-38



1938-39



\* SOUTH AFRICA, AUSTRALIA, NEW ZEALAND, ARGENTINA.

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## The Scandinavian Countries

Pears are an uncertain crop in the Scandinavian countries, and production and plantings are limited. Appreciable quantities of the fruit are imported annually, especially in years when the home-grown crop is below normal. Home-grown pears are not exported from these countries.

Sweden - Total bearing and nonbearing trees in Sweden were given at 1,176,000 in the agricultural census of 1932. Since then, some increase in plantings has been reported. Plantings are located chiefly in the southern part of the country. According to the British Imperial Economic Committee, the Swedish pear crop averages around 1,150,000 bushels annually.

Imports of pears into Sweden rose over 50 percent between 1926-1930 and 1938. European producers accounted for 79 percent of the total in the 1926-1930 period while non-European countries supplied 87 percent in 1937, the last year for which detailed statistics are available. The rise in imports from the United States has been particularly rapid, and Sweden became the fifth most important market for American pears in the 1938-39 season. During the spring and summer of 1938, South Africa, Argentina, and Australia supplied important quantities of pears to this country. This trade increased substantially during the 1930's. Czechoslovakia, which formerly was the principal supplier to this market, has been a minor source of supply since 1935.

Norway - Pear growing in Norway is limited because of the shortage of available land and unfavorable climatic conditions. Plantings in recent years, however, have been increasing somewhat. In 1938 tree numbers were estimated at 314,000 compared with a total of 279,000 in 1929.

Production of pears in Norway averaged 130,000 bushels in the 3 years 1936-1938, or about 87 percent of average production during the previous 4 years. Imports normally average around 10,000 bushels, and the United States is the principal source of supply. During the 1938-39 season American exports to Norway reached a record high of 24,000 bushels.

Finland - Due to severe frosts during the winter, pears are not grown extensively in Finland, and plantings are relatively insignificant. According to an unofficial estimate, only 39,000 pear trees were in the country in 1930. Estimates of production and bearing-tree numbers are not available. The bulk of the plantings are located in the southwestern part of the country.

Imports of pears into Finland have risen considerably in recent years. Imports in 1938 were around 65 percent heavier than the average movement during the 5 years, 1926-1930. During 1938 the United States supplied 70 percent and non-European producers 89 percent of Finland's total imports.

PEARS: Imports into Sweden, Finland, and Denmark, by principal countries, averages 1926 to 1930, 1931 to 1935, annual 1936 to 1938

Country	Averages		1936	1937	1938
	1926 to	1931 to			
	1930	1935			
	1,000	1,000	1,000	1,000	1,000
	bushels	bushels	bushels	bushels	bushels
<u>Sweden</u>					
United States.....	19	75	150	131	
Argentina.....	a/	b/	26	46	
South Africa.....	b/	23	44	49	
Australia.....	b/	3	29	32	
New Zealand.....	b/	5	18	6	
Czechoslovakia.....	148	88	56	13	
Italy.....	44	35	15	22	
Others.....	64	48	2	3	
Total.....	275	277	340	302	c/ 433
<u>Finland d/</u>					
United States.....	1	8	32	38	48
Italy.....	12	9	6	7	6
Czechoslovakia.....	7	8	13	7	2
Australia.....	a/	a/	4	5	6
South Africa.....	a/	a/	3	4	4
Others.....	e/ 22	14	2	3	2
Total.....	42	39	60	64	68
<u>Denmark</u>					
Germany.....	52	34	b/	b/	
Czechoslovakia.....	45	12	0	0	
Italy.....	26	7	6	7	
Belgium.....	8	2	0	0	
Netherlands.....	6	1	0	0	
United States.....	1	9	b/	0	
Others.....	13	8	2	1	
Total.....	151	73	8	8	c/ 6

Compiled from official sources. Bushels of 50 pounds.

a/ If any, included in "Others."

b/ Less than 500 bushels.

c/ Not available by countries.

d/ Prior to 1936, figures represent country of shipment including country of reexport, while after 1936 country of origin of export is shown.

e/ Includes 16,600 bushels shipped from Germany.



Denmark - The total number of pear trees in Denmark, bearing and non-bearing, was estimated at 1,297,000 in 1929. Fruit production has been actively encouraged in the country in recent years, and the heavy duty imposed on imported fruit in 1932 has been of considerable assistance to domestic producers.

Imports have declined sharply since 1930, and the duties imposed in 1932 were largely responsible for the drop. Imports during 1938 were less than 4 percent of average arrivals during the 5 years, 1926-1930. Germany, Czechoslovakia, and Italy were the important suppliers during the earlier period, while Italy has supplied most of the imports in recent years. Imports from the United States have never been appreciable, and the trend has been sharply downward during the past few years.

### Central and Southern Europe

Pears are planted extensively throughout Central and Southern Europe, but the bulk of the crop consists of perry and low-quality dessert fruit. Germany is a large producer of the fruit, particularly of perry varieties, and is the most important import market for exporting sections in this region. Italy, Switzerland, and Czechoslovakia are the important surplus countries. With the absorption of parts of Bohemia (Czechoslovakia) and Austria into Greater Germany, an appreciable part of the pear trade that previously had been considered as moving in international trade can no longer be properly classified as such. Due principally to exchange and import controls and, in some countries, to generally low standards of living, non-European pears have never been consumed extensively in this area.

#### Germany 9/

Germany is the second largest pear importing country in the world. During the years 1926-1930 average imports were only slightly below those of Great Britain, but imports have declined rapidly since 1930. Domestic production is apparently increasing and the government has been assisting in improving the quality of the crop.

Production - Germany was second to the United States as a producer of pears during the early 1930's. Production between 1933 and 1937 averaged 21,779,000 bushels. Estimates prior to 1933 are not available. Tree numbers in the country expanded between 1933 and 1937. Bearing trees increased from 19,079,000 in 1933 to 21,809,000 in 1936, while total trees rose from 26,354,000 in the earlier year to 29,244,000 in 1935.

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9/ Based in part upon an unpublished report by Gordon P. Boals entitled "Pear Situation in Central Europe."

The most important pear-producing districts in Germany are in the southwest provinces, particularly Wurttemberg and Baden, along the Rhine, and in certain parts of central and northern Germany. In the pear tree census of 1934, Prussia accounted for 48 percent of the total, Wurttemberg for 15 percent, Bavaria for 13, Baden for 9, and Saxony for 7 percent. The bulk of the production in southern Germany consists of perry varieties while production of the better-quality dessert pears is found chiefly along the Rhine.

Considerable improvement has been made in the quality of the pear crop in recent years and the Government has been an important factor in this development. Perry trees, particularly in the south, have been reworked to improved juice and table varieties, and new plantings of dessert and cooking varieties have been encouraged. Government aids and higher returns on better-quality table and perry fruit have stimulated this reorganization. German farmers are also giving trees more attention. Consequently, some improvement in the quality of the fruit and in average yields has taken place.

Imports - Imports of pears into Germany have been declining for the past decade. Imports between 1936 and 1938 averaged a little more than one million bushels, compared with an average of 2,408,000 bushels in the years 1926-30. Italy has been the most important supplier since 1930, followed by Switzerland and Czechoslovakia. Imports from Belgium, the Netherlands, and Czechoslovakia have declined sharply during the past decade. Imports from the United States have never been large.

GERMANY: Imports of pears by principal countries, calendar years,  
averages 1926 to 1930, 1931 to 1935, annual 1936 to 1938

Country	Averages		1936	1937	1938
	1926 to 1930	1931 to 1935			
	1,000	1,000	1,000	1,000	1,000
	bushels	bushels	bushels	bushels	bushels
United States.....	10	61	16	2	51
Italy.....	535	606	764	601	475
Netherlands.....	301	121	27	80	10
Czechoslovakia.....	673	433	180	142	89
Belgium.....	573	232	18	33	a/
Switzerland.....	209	96	141	153	392
Others.....	107	59	31	26	68
Total.....	2,408	1,608	1,177	1,037	985

Compiled from official sources. Bushels of 50 pounds.

a/ If any, included in "Others."

The sharp reduction in imports in recent years is principally the result of the German tariff and systems of exchange and trade controls. Imports come almost entirely from neighboring countries, and producers outside of Europe

have never been able to build any large market in this country. The very low duty on fruit in bulk and sacks discriminates against box-pack fruit from non-European countries. Even more important have been the various Government controls, for non-European pears have been classified as luxuries and allocations of exchange for their purchases have, consequently, been extremely limited.

Recent territorial acquisitions - The territory acquired by Germany up to the outbreak of war did not materially alter the pear situation in the areas concerned. Of that territory that was incorporated into Greater Germany, prior to September 1939, Austria and Poland are importing regions. A portion of the Bohemia surplus pear area has been included in the Sudeten section that was annexed by Germany. Bohemia itself, which is the chief surplus-producing area, has been given the status of a protectorate and, while shipments to Germany are not included as imports, Bohemian pears are reported separately in German trade statistics. 10/ Although they have changed the status of some of this trade, these political changes have not appreciably altered the volume or direction of pears moving in this area.

Pear production in Austria during 5-year period 1926-1930 amounted to only 57 percent of the average for the previous 4 years, chiefly because of extensive freeze damage to the trees in 1928-29. During the early 1930's, production recovered considerably but was still below the 1922-1925 average. Between 1931 and 1935, the crop averaged 5,395,000 bushels, of which only 19 percent was classed as table fruit. Lower Austria and Styria are the principal producing Provinces.

Tree numbers, bearing and nonbearing, were officially reported at 3,508,553 in 1930, or about 25 percent of the total fruit and nut trees in the country. Between 1934 and 1936, agricultural organizations in some of the important Provinces attempted a fruit-tree count in connection with measures taken to combat San José scale. The Government, on the basis of these figures, estimated the number of pear trees at 6,590,000 in 1936. The actual net gain in pear trees between these two dates, however, was probably more moderate since the bulk of new plantings were replacements. During the severe winter of 1928-29, a large proportion of pear trees in Central Europe were killed and the 1930 census was taken shortly after the freeze but before many replacements were made.

The two important pear-producing areas of the old Austro-Hungarian Empire, the Tyrol and Bohemia, were severed from Austria proper after the World War, and the country was a substantial importer of pears during the past 2 decades. Imports between 1929, the first year imports were separately

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10/ A customs union between Greater Germany and the Protectorate of Bohemia and Moravia was to have been put into effect in April 1940, according to reports, but has apparently been postponed. Under this proposal, separate statistics on German-Bohemian trade will be discontinued.



reported, and 1936 fluctuated between 200,000 and over 800,000 bushels. Italy was the principal supplier, though Switzerland was the chief country of origin in 1929 and 1936. Czechoslovakia and Hungary were also important exporters to Austria. Imports from the United States were negligible.

The trend in pear production in former Czechoslovakia has been similar to that of Austria. Production between 1926 and 1930 averaged 2 million bushels, or 40 percent less than the crop during the previous 5 years because of extensive freeze damage in the winter of 1928-29. During 1931 and 1935, the crop increased to around 5,218,000 bushels, but this was slightly less than the 1921-1925 average.

Bohemia was the principal producing region in the country. According to the 1935 census, about 59 percent of the pear trees were in that Province, 25 percent in Moravia and Silesia, 14 percent in Slovakia, and 2 percent in Carpathian Russia. The center of Bohemian production is in the Elbe River districts in the northwest part of the country. The bulk of the crop in former Czechoslovakia consists of table and cooking pears, and low grade fruit, rather than special perry varieties, is used for cider purposes. The principal varieties of pears include Salanky, Clapp's Favorite, Williams, Hardy, Bosc, and Triumph.

Tree data for this country are rather complete, for censuses were taken in 1920, 1930, and 1935, and the tree numbers were estimated in 1928. The increase in plantings between 1930 and 1935 more than offset the decline in tree numbers between 1928 and 1930. Around 7,090,820 trees were in the country in 1935, compared with 6,917,712 in 1928, and 3,351,963 in 1920.

**CZECHOSLOVAKIA: Exports of fresh pears by principal countries, calendar years, average 1932 to 1935, annual 1936 to 1938**

Country	: Average : :1932 to 1935:	: 1936 : :	: 1937 : :	: 1938 a/ :
	: 1,000 : : bushels	: 1,000 : : bushels	: 1,000 : : bushels	: 1,000 : : bushels
Germany.....	295.4	182.7	147.1	89.9
Austria.....	38.9	55.4	30.7	27.8
Sweden.....	20.7	53.4	12.7	8.3
Finland.....	4.5	13.3	6.5	1.3
Switzerland.....	.1	16.4	1.6	0
Netherlands.....	3.3	12.5	1.7	.9
France.....	.6	22.4	8.6	0
United Kingdom.....	.4	7.2	7.6	0
Others.....	4.2	b/ 29.5	4.2	0
Total.....	368.1	392.8	220.7	128.2

Compiled from official sources. Bushels of 50 pounds.

a/ January - September only.

b/ Belgium 29,255 bushels, Norway 203 bushels.

Czechoslovakia formerly was the second most-important European exporter of pears. Exports during the past 7 years have average 316,000 bushels. Germany has been the principal market, accounting for around 60 percent of the movement. Austria and Sweden followed in order and these three countries accounted for the bulk of the exports. Czechoslovak exports consisted chiefly of early maturing varieties of the fruit. Imports of pears into this country have been insignificant.

Former Poland was never an important factor in the European pear trade. Despite the size of the country, production was relatively small, particularly after the freeze in 1928-29. Tree numbers were reduced sharply by this, though no official estimates of the extent of damage are available. Production during the late 1920's ranged between 7.5 and 11 million bushels, according to figures of the International Institute of Agriculture, but unofficial estimates have placed the crop in recent years at around 2 to 3 million bushels. The most important fruit districts in Poland are in areas around Warsaw and in the southeast, particularly near Wolyn and Lwow. The bulk of the crop is of low-quality fruit.

Poland has not exported or imported significant quantities of pears since 1918. Imports have been restricted by high tariffs and a stringent system of exchange control. Italy has supplied most of the imports. The standard of living of the people has been too low, in any case, to provide a large market for imported non-European pears.

### Italy

Italy has become the most important European exporter of pears and is the only continental surplus-producing country whose shipments have been expanding during the past decade. Italian production of pears has risen appreciably in recent years. Production during the 5 years, 1934-1938, averaged 9,488,100 bushels compared with an average of 7,799,600 bushels during the previous 5-year period.

The chief producing areas are in Piedmont, Tyrol, Emilia, Campania, and Calabria. Considerable improvement in pack and quality has taken place, particularly in the Tyrol and Piedmont sections. The Williams (Bartlett) is by far the most important variety produced in the country.

Despite the substantial increase in production, exports have not shown any marked upward trend. Shipments during the 3 years, 1936-1938, totaled 1,117,000 bushels, or about the same as the average volume moving in the 4 years, 1931-1934, and around 15 percent heavier than the average for the preceding 5 years.

The bulk of Italy's pear exports goes to the neighbor countries and to Central Europe. Germany is by far the most important market and accounted for about 58 percent of the total movement during the 4 years, 1931-1934.

Switzerland and Austria followed with 11 and 10 percent, respectively. In recent years, exports to Belgium have increased somewhat, but no significant upward trend in shipments from Italy to Western European countries is apparent. The Italian shipping season runs from July to October with August the peak month.

ITALY: Exports of fresh pears by principal countries, calendar years, averages 1926 to 1930, 1931 to 1934, annual 1936 to 1938

Country	Averages		1936	1937	1938
	1926 to 1930	1931 to 1934a/			
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
Germany.....	597	649	764	751	595
Austria.....	133	117	76	b/	b/
France.....	36	73	35	47	23
United Kingdom.....	37	64	34	c/	c/
Belgium.....	3	6	20	38	46
Netherlands.....	3	9	c/	c/	c/
Sweden.....	36	42	c/	c/	c/
Switzerland.....	85	122	292	81	212
Yugoslavia.....	3	2	c/	64	29
Egypt.....	17	7	c/	c/	c/
Others.....	21	24	67	64	113
Total.....	971	1,115	1,288	1,045	1,018

Compiled from official sources. Converted to bushels of 50 pounds.

- a/ 4 years only. Figures for 1935 not available.  
b/ If any, included in "Germany."  
c/ Less than 500 bushels.

### Switzerland

Switzerland is a substantial producer of pears, particularly of perry varieties, and during years of large crops exports significant quantities to neighboring countries. Reorganization of the pear industry has taken place in recent years. Imports of the fruit have been considerable, though the United States has been a relatively minor factor in the Swiss import deal as far as direct shipments go.

Production - Production in Switzerland fluctuates considerable from year to year. During the 5 years, 1931-1935, it averaged 8,183,000 bushels, or around 1,500,000 bushels heavier than the average for the previous 5-year period. Between 1936 and 1938, the crop averaged 7,275,000 bushels. In a census in August 1929, the number of bearing trees was estimated at 3,449,293,



or around 28.6 percent of the total bearing fruit trees in the country. Largely due to the removal of old trees, a decline in tree numbers is believed to have taken place in recent years, though no figures are available.

The principal pear sections are the lake regions of the central part and the Bodensee district in the northeast part of the country. Production of perry pears predominate, particularly in the northeastern area. Quality table fruit is also grown in the Valais Canton, of the southwest, part of which is shipped direct to the Paris market.

The bulk of the Swiss crop is used for beverage or industrial purposes. Recently there has been a movement to reorganize the pear industry. Attempts have been made to reduce the numbers of perry trees and to reduce the volume of fruit destined for beverage purposes through increased care of the trees and of the fruit. Despite the assistance of the Swiss Federal Alcohol Administration, which has included subsidies in its program, progress has been slow. Plantings in Switzerland are scattered but some increase in orchard plantings has taken place in recent years.

Statistics on pear exports and imports are not reported separately in Swiss trade returns. According to estimates of the British Imperial Economic Committee, Switzerland has been a net exporter of pears, but imports have increased in recent years. 11/ Practically the entire export movement goes to Germany and former Austria. Imports have averaged around 260,000 bushels, with Italy and France the principal suppliers. Imports from the United States since 1931 have been calculated at between 10,000 and 30,000 bushels a year.

#### Southeast Europe 12/

The four pear-producing countries in Southeast Europe - Hungary, Rumania, Bulgaria and Yugoslavia - are relatively unimportant factors in the European pear situation. Plantings are scattered throughout these countries, but the proportion of good quality fruit is very small. Rumania and Yugoslavia export minor quantities of pears to nearby countries, while imports into these four countries are negligible.

Hungary - Pear growing in Hungary is probably more advanced than that of any other Danube country. Tree numbers were estimated at 2,882,209 in 1935, of which 65 percent were bearing. Pears represent over 8 percent of the total fruit trees in the country. Plantings have expanded during the past 15 years and the rate of net new plantings between 1932 and 1937 has been estimated at around 3.5 percent per annum.

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11/ "Apples and Pears," p. 231 ff.

12/ Based in part upon unpublished reports by J. P. Wilson entitled "The Pear Situation in Southeast Europe."

Hungary has exported minor quantities of the fruit, over 80 percent of which went to Austria and the bulk of the remainder to Germany. Exports consisted chiefly of summer varieties shipped to Vienna and other nearby markets. Imports are very small and come chiefly from Italy.

Rumania - Production of pears in Rumania in the 5 years, 1931-1935, was around 2,096,000 bushels, or 46 percent of the average for the previous 4 years. Between 1936 and 1938, the crop averaged around 4,719,000 bushels. Plantings have also increased in recent years. In 1937, tree numbers were unofficially estimated at 4,405,000, compared with the official estimate of 3,650,000 trees in 1932. The principal centers of production are in Transylvania, Maldania, and Mutenia.

Exports of the fruit from Rumania have been very small, and the bulk of shipments have gone to Germany. Exports have been chiefly winter varieties, which are, in the main, produced in commercial or semi-commercial orchards. The major portion of the Rumanian crop, however, consists of early ripening native and imported varieties of pears, which are grown chiefly on small peasant holdings for home consumption. Imports into the country are not reported.

Bulgaria - Commercial pear production in Bulgaria during the 3 years, 1936-37 to 1938-39, averaged 60,000 bushels, compared with 15,000 bushels during the previous 5 years. Commercial production, however, is a relatively unimportant part of the Bulgarian fruit industry, since pears grow wild and semiwild in many parts of the country. Although commercial production is expanding somewhat, it is unlikely that Bulgarian pears will appear in Central or Western European markets in any volume in the near future.

Yugoslavia - The Yugoslav crop averaged 2,135,000 bushels during the 3 years 1936-1938, compared with the average of 3,078,000 bushels for the 5-year period, 1926-1930. Tree numbers on the other hand, have increased from around 3,700,000 in the earlier period to about 4,538,000 in 1938. Yugoslav pears are largely wild or semiwild types and plantings are scattered throughout the country. The principal producing areas are located in the northwest part of the country and in northern Bosnia. Exports from the country have been small, the bulk moving to Austria and Germany.

#### IMPORTING COUNTRIES OUTSIDE EUROPE

Although non-European importing countries account for a very small proportion of total world imports, the volume of this trade has expanded in recent years. Southern and Northern Hemisphere countries exchange pears on a seasonal basis. Thus, for example, the United States exports pears to Argentina during the fall and winter and imports Argentine pears during the spring months.



In North America, the United States has been increasing its imports of pears, while Canadian imports have shown a downward trend. The South American import trade is expanding, chiefly because of heavier exports from Argentina. The requirements of Egypt and Palestine are being met to an increasing extent by imports from the United States. The Orient continues to be, for the most part, a self-contained unit, and Australia and the United States ship only limited quantities to these markets.

### North America

Imports into North American importing countries are relatively small. During the fall and winter months, the United States supplies the bulk of imports into these markets, while Southern Hemisphere countries move their produce during the spring months.

Canada - Principally as a result of heavier production, imports into Canada have been declining for a number of years. Imports since 1936-37, however, have been above the average for the 5 years, 1931-32 to 1935-36. The United States supplies almost the entire import, although recently slight quantities have come from Australia during the summer season.

Mexico - Pears are a minor fruit crop in Mexico. The number of bearing trees expanded up to a record high of 237,000 in 1935 but has since been declining. Production has declined slightly, averaging 335,000 bushels in the 5 years, 1931-32 to 1935-36, or about 13,000 bushels less than the previous 5-year average. Exports from the United States to Mexico have averaged just under 11,000 bushels during the past few years.

Cuba - Pears are not produced commercially in Cuba, and no estimates of plantings are available. Imports have expanded since 1935 but have not reached the level of average imports in 1928-1930. In 1938, imports totaled 30,000 bushels. The United States supplies practically the entire total.

United States - The United States imports pears during the spring months. They come chiefly from Argentina, with minor quantities from Chile. United States imports from Argentina have increased rapidly during the past few years and reached a total of 80,000 bushels during the spring of 1939 and 219,000 bushels in 1940.

### South America

Argentina - Argentina and Brazil are the principal importers of pears in South America. Argentine imports come chiefly in the fall and early winter months from the United States. United States exports to this country have been



declining for a number of years, chiefly as a result of certain exchange, tariff, and sanitary regulations that were introduced by Argentina, beginning in 1931.

Brazil - Pears are not produced commercially in Brazil. Imports have expanded recently, rising from an average of 98,000 bushels during 1926-1930 to 122,000 bushels in the 1931-1935 period. In 1936, imports totaled 207,000 bushels. Based upon Argentine and American export statistics Brazilian imports have increased since 1936. Although the volume of United States exports has been maintained, they have not been expanding during the past few seasons. Imports into other South American countries are apparently also increasing, chiefly as a result of heavier exports from Argentina.

### Near East

In the Near East, Palestine and Egypt have become increasingly important as markets for non-European pears. The United States supplies the bulk of imports, and the volume of this trade has expanded in recent years.

Palestine - Pears are not produced commercially in Palestine, and, although no statistics are available, plantings are probably limited and scattered. Statistics on pear imports by countries are not available, but United States export figures show that shipments to that country increased somewhat during the 1930's. Between 1930-31 and 1935-36 exports averaged 18,000 bushels compared with an average of 29,000 bushels between 1936-37 and 1938-39.

Egypt - Pears are not produced on any large scale in Egypt; in 1935, for example, the number of pear trees in the country was estimated at about 14,000. The country is dependent almost entirely upon imported supplies.

Imports into the country have been increasing. Although imports during 1931-1935 averaged only 60 percent of those in 1926-1929, arrivals between 1936 and 1938 were heavier than those in the latter part of the 1920's. Italy, Greece, and Turkey were formerly the principal sources of supply, but the United States became the principal supplier in the 1931-1935 period. During the 1930's the United States share gradually increased until it reached a record high of 95 percent in 1938.

### Orient

Although pears are grown on a considerable scale in certain Oriental countries, particularly Japan, Chosen, and parts of North China, exports and imports in this region are confined to nearby countries and the total trade

in the Orient is relatively unimportant in the world situation. Production and trade data are not available for a number of these countries.

Japan - Japan has produced on an average over 7 million bushels of pears in recent years, compared with an average of just under 5 million bushels in the 5 years, 1921-1925. Practically the entire output consists of native varieties, for imported varieties account for only a little over 100,000 bushels annually. Almost the whole of the production is consumed locally. Although statistics are not available, the export and import trade is small. Some pears, however, are shipped to Chosen.

Chosen - Although production has doubled since the war of 1914-1918, the total crop in Chosen during the 5 years, 1931-1935, averaged only 613,000 bushels. Despite encouragement by the Japanese Government, tree numbers have increased only slightly. Exports from Chosen are small and a large portion of the exports are reported to be reexports of Japanese pears.

China - Pears are grown rather extensively in the northern part of China, but statistics on production are not available. Exports from China, however, have ranged between 200,000 and 250,000 bushels annually. The bulk of the movement goes to Hong Kong, with lesser quantities to Kwantung.

Philippine Islands - The Philippine Islands is a relatively minor pear importer. Total imports seldom exceed 20,000 bushels. China provides the bulk of the supply, while the United States and Japan are minor suppliers.

Slight quantities of pears are also shipped to Hong Kong, the Netherlands East Indies, and to the British and French possessions in India. Although import data are not available, export statistics show that Australasia and the United States move minor quantities of fresh pears to markets in this area. The bulk of imports, however, comes from producing areas in the Orient.

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The following publications on fruits and vegetables are available upon written request to:

Office of Foreign Agricultural Relations  
United States Department of Agriculture  
Washington, D. C.

World Apple Production and Trade, September 1932.  
World Fresh Fruit Production Statistics, August 1938.  
World Fresh Pear Production and Trade, October 1940.

Statistical Report of the U. S. Deciduous Fruit Export Season, (annual)  
1935-36.

Statistical Report of the U. S. Deciduous Fruit Export Season, 1936-37.  
Statistical Report of the U. S. Deciduous Fruit Export Season, 1937-38.  
Statistical Report of the U. S. Deciduous Fruit Export Season, 1938-39.

Statistics Relating to Citrus Industry, December 1933.  
Statistics Relating to Grapefruit Industry, January 1936.  
Statistics Relating to Orange Industry, May 1936.  
Statistics Relating to Lemons and Limes, April 1938.  
The Citrus Industry in Palestine, December 1939.

Production and Marketing Calendar of American Fruits, April 1932.

Imports of Fruits and Vegetables under Quarantine, (annual) 1936-37.  
Imports of Fruits and Vegetables under Quarantine, 1937-38.  
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The Florida Winter Vegetable Industry and the Trade Agreement with Cuba,  
August 1937.



